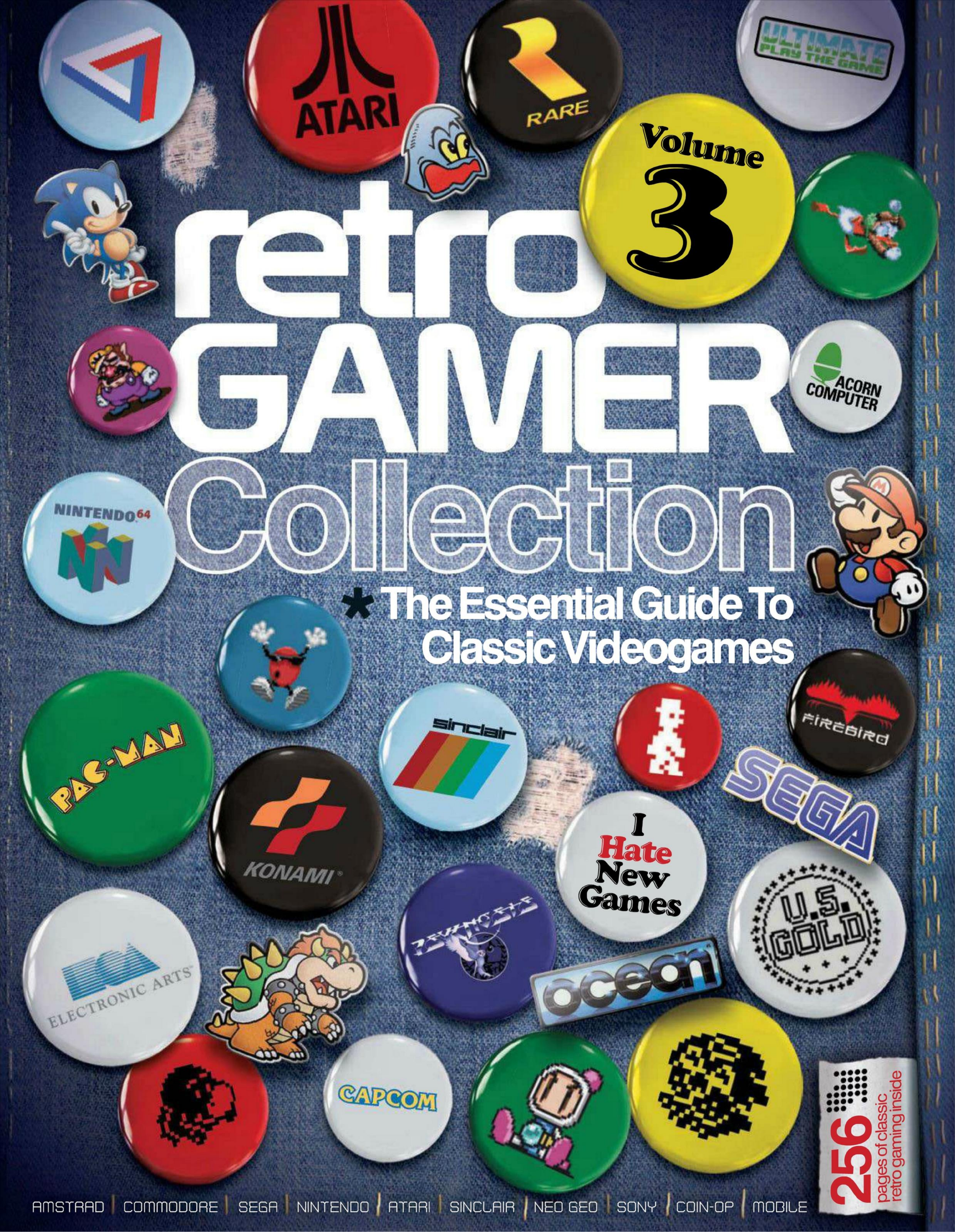


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Imagine Publishing Ltd, Richmond House
33 Richmond Hill, Bournemouth, Dorset BH2 6EZ
☎ +44 (0) 1202 586200
Website: www.imagine-publishing.co.uk

Project Editor Darran Jones
Editor-In-Chief Rick Porter
Senior Sub Editor Helen Laidlaw
Sub Editor Olly Dean
Senior Art Editor Greg Whitaker
Senior Designer Sarah Bellman, Stephen Williams
Designers Charlie Aspery, Stacey Grove,

Contributors
Mike Bevan, Stuart Campbell, Martyn Carroll, Jonti Davies, Paul Drury, Stuart Goodwin, Craig Grannell, Stuart Hunt, Damien McFerran, Robert Mellor, Spanner Spencer, Mike Tooley, Kim Wild

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It's here! Our third anthology is better than ever!



So here we are, with another bookazine that's positively bursting with classic retro goodness. Retro Gamer has come a long way over the last three years and as a result we've gained access to some of the biggest names in the industry, enabling us to look back at the creation of some of the greatest games of all time. Inside this essential bookazine you'll be able to learn about the origins of Sega's *OutRun*, read through an in-depth, screen-by-screen guide to Matthew Smith's sensational *Manic Miner* and discover the secrets behind David Braben and Ian Bell's seminal *Elite*, one of the most influential 8-bit videogames of all time.

Here at **Retro Gamer** our passion for gaming is unrivalled and we'll always go that extra mile to unearth the real story behind some of the industry's most important games and their creators. All you have to do is take this essential guide home and lose yourself in 258 pages of nostalgic wonder.

Enjoy.

retro* GAMER Collection

» YOUR ESSENTIAL GAME ANTHOLOGY

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FEATURED HARDWARE IN-DEPTH

THE SIMPSONS

A FAITHFUL RECREATION OF THE ANIMATED SHOW



- **PUBLISHER:** KONAMI
- **RELEASED:** 1991
- **GENRE:** SIDE-SCROLLING BEAT-'EM-UP
- **FEATURED HARDWARE:** ARCADE
- **EXPECT TO PAY:** £50 PCB BOARD



HISTORY

The Simpsons **doesn't really have the finest track record when it comes to classic videogames.** *Virtual Bart*, *Bart vs The Space Mutants* and *Bart's Nightmare* all pretty much formed the stuff of real nightmares. But when Konami got hold of the licence, it took it by the horns, gave it a well-needed slap to its yellow chops and crafted one of the finest and most humorous arcade games of the Nineties. And thank God that it had the brains not to include the word 'Bart' in the title.

The Simpsons took everything that was great about the show and crammed it into an interactive cartoon. The glorious, vivid look of the show was perfectly recreated, as was the humour and its trademark charisma. Lisa, Marge, Homer and Bart were all there, voiced by the original actors, and ready to be led into the chaotic action, which involved chasing down Smithers, thwarting Mr Burns and rescuing poor little Maggie.

Thankfully, Konami based the game's levels on the recognisable locales of Springfield and had many of the series' wildly charismatic populace turn up throughout the game. It also introduced new characters to the mix, such as the generic-looking goons and those guys that looked like Gunther from *Friends*. However, they all played cannon fodder to Marge's vacuum cleaner, Bart's skateboard, Lisa's jump rope and Homer's puffy fist.

Released after the second series had finished airing in the US, *The Simpsons* was a strange take on the side-scrolling brawlers of the day. Based on the engine of Konami's *Teenage Mutant Ninja Turtles* cab, it introduced a unique fighting system, allowing players to team up, fight in tandem and pick up heavy objects. The game didn't shirk on the show's love of the pastiche, either – it was littered with episodic-nods for *Simpsons* fans to pant-wet over.

All of the game's peculiar and colourful end-bosses proved annoyingly credit-hungry, but none more so than frail, old Mr Burns, who, with the aid of a mech-suit, would probably cause even Ned Flanders to swear like a trooper and put his fist through the cab's screen.



INSERT COIN
18
VIDEO ARCADE
THE SIMPSONS NEW GAME
073
074
SALE SALE SALE SALE SALE SALE
Eughh!
Pet Shop
SPRINGFIELD FIRE DEPT
BUS
Hit Buttons!
DO NOT ENTER
SPRING FIELD AMUSEMENT PARK
1
2
3
Eughh!

THE HISTORY OF
ZELDA





DONKEY KONG MAY WELL HAVE BEEN NINTENDO'S MOST IMPORTANT CREATION, BUT THERE'S ANOTHER THAT WAS THE REAL DRIVING FORCE BEHIND THE COMPANY'S SUCCESS. A GAME THAT THE BIG APE HELPED TO STUMP UP THE CASH FOR. JOIN STUART HUNT AS HE WHIPS OUT HIS OCARINA AND BANGS OUT A LENGTHY TUNE

Since his videogame debut in 1985, save for the Virtual Boy, Link has always worked his little elfin boots off to ignite interest in every single piece of Nintendo hardware to ever find a release… and even some of the weird and wonderful contraptions that never left his native Japan. Even through that dark GameCube period, where seemingly infallible Nintendo IPs were somehow failing to capture that Nintendo magic, there was one licence that has always looked after its Nintendo Seal of Quality. It's apt, then, that *Zelda* would become the final resting place for the GameCube, and the first licence that Nintendo would turn to as a 'proper' launch title for its much-hyped Wii.

Before Hyrule, videogames were usually single-screen worlds filled with bleeping and chirping sprites, where progression and skill was distinguished by stamping three letters into a list. And before *The Legend Of Zelda*, game narratives were generally spared a measly paragraph on an arcade cab or a few dubiously spelt words on a menu screen, and rules and stories would generally play out via easily digestible visuals and an ounce of common sense – escape the ghosts, shoot the crab-looking invader, avoid those asteroids.

Off the back of the unprecedented arcade success of *Donkey Kong*, Nintendo would be able to finance three pivotal projects that would transform it from a Hanafuda card manufacturer dabbling in the world of electronic entertainment, to a leading player in that very market almost overnight: the Famicom, *Super Mario Bros* and *The Legend Of Zelda*.

Zelda's development would begin at around the same time as *Super Mario Bros*, with Shigeru Miyamoto splitting his time between his divided development team and overseeing both projects. His early intention for *The Legend Of Zelda* was to create a sprawling 'virtual garden'; a videogame set inside a lush world that would grow and unfurl. The thinking, at that time, was that *Super Mario Bros* was going to offer an immediately accessible and technically unique gaming experience, and *The Legend Of Zelda* would offer gamers the freedom to essentially shape their own adventure.

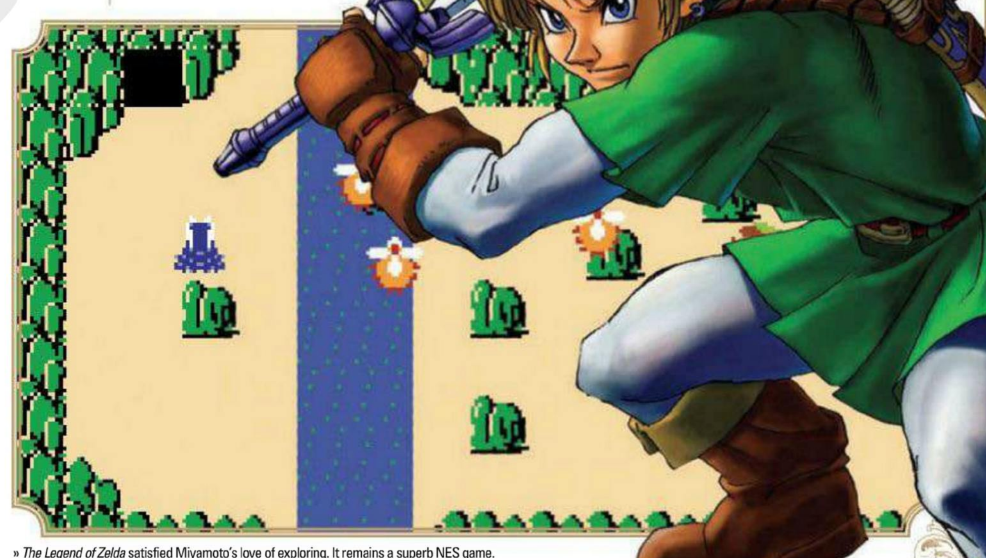
Despite this peculiar juxtaposition of projects inside the camp, *Mario* and *Zelda* would both decide to outmode the element of high-score chasing and instead replace it with the notion of completion – ending the gaming experience and unlocking a reward screen for your troubles. It was a belief that wouldn't hold up inside the money-feeding world of arcade gaming, but one that Miyamoto believed was perfectly viable in the home.

Miyamoto grew up in the small town of Sonebe, in Kyoto, Japan – a picturesque upbringing that would offer the perfect place for his fertile mind to wander. He was a keen artist with an affinity for music, architecture and design; passions that would ultimately lead him onto an academic road in industrial design and as a staff artist for Nintendo. But it was his early fascination for exploration that he would ultimately try to impart to the player through *Zelda*.

His inspiration behind the dungeons – now a staple of the *Zelda* series – came



» *Zelda II* is generally regarded as one of the weakest games in the series.

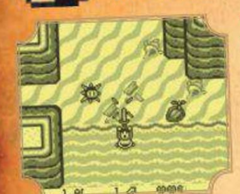


» *The Legend of Zelda* satisfied Miyamoto's love of exploring. It remains a superb NES game.



A Link To The Palm

WE TAKE A TINY LOOK AT ZELDA'S QUITE FANTASTICAL LITTLE HANDHELD HERITAGE



The Legend Of Zelda: Link's Awakening

Released: 1993
System: Game Boy

The first, and what many fans consider the best, portable *Zelda* game. *Link's Awakening* was a dazzling GB follow-up to *A Link To The Past* that would mark the first time that the series would ever play an away game and Zelda and the Triforce would get left on the sub's bench. It's also the first *Zelda* game not to be directed by Shigsy – possibly why it has a lot of *Mario* imagery in it. Link is marooned on the strange island of Koholint, where he learns of the mysterious Wind Fish, a giant guppy that lives inside an egg sitting atop a volcano. Legend has it that when the fish is awoken he will be mighty peeved and the island will disappear, so Link and an owl set off to find an orchestra of instruments and aim to wake up the slumbering Fish to put the myth to the test.



The Legend Of Zelda: Link's Awakening DX

Released: 1998
System: Game Boy Color

Adding its name to the Game Boy Color's Deluxe series, *Link's Awakening DX* would be a coloured-in, spruced-up port of the Game Boy original. As well as improving the visuals, which looked pretty fantastic to begin with, Nintendo would also add a few new additions to the game, most notably a new 'Color Dungeon', which made use of colour-based puzzles, and a camera shop and photo album function that made use of the Game Boy Printer.



The Legend Of Zelda: Oracle Of Seasons/Oracle Of Ages

Released: 2001
System: Game Boy Color/Game Boy Advance

Released consecutively, *Oracle Of Ages* and *Oracle Of Seasons* would be the first handheld *Zelda* games not to be developed by Nintendo. Instead, the Capcom/Sega-funded studio Flagship, founded by Capcom stalwart Yoshiki Okamoto, would take hold of the reigns. The *Oracle* series would initially start out as a planned Triforce trilogy; three games that could be played in any order and allow your actions in one game to have an influence on the others. Because of the complexity in achieving this, the idea was later scrapped and the trilogy became a duo. But through use of a password system the influencing elements would remain.



The Legend Of Zelda: A Link To The Past & Four Swords

Released: 2003
System: Game Boy Advance

Marking the start of a series crossover between the GBA and the GameCube, Flagship Studios was at it again with this sublime double-pack that housed a brilliant redux of the SNES classic and a four-player multiplayer add-on in *Four Swords* – the first time the series would introduce multiplayer elements. *Four Swords* allowed two to four players to link up their GBAs, take control of a different coloured Link (red, blue, purple and green) and work together to crack its clever colour-themed puzzles. Adopting *The Wind Waker*'s chipper look, the game would also introduce a new villain in Vaati, who would become an iniquitous mainstay in the *Four Swords* series.



The Legend Of Zelda: The Minish Cap

Released: 2004
System: Game Boy Advance

Just to make things confusing for everyone, *The Minish Cap* marks the final game in Flagship's *Four Swords* trilogy, but is actually said to be the prequel to the first game in the series. In terms of narrative – sages being mysteriously transformed into talking caps, Link shrinking in size and then bafflingly transforming into a large sphere – it is all a little bit strange, but it all makes for another quality *Zelda* caper. Graphically, with a closer camera, picking up the brilliant hues and attention to detail packed into the game, *The Minish Cap* is probably the best-looking *Zelda* handheld game to find a release before *Phantom Hourglass*.



The Legend Of Zelda: Phantom Hourglass

Released: 2007
System: DS

Making inspired use of the Nintendo DS's touch-screen capabilities, *The Legend Of Zelda: Phantom Hourglass* shows us how great a *Zelda* game can be when Nintendo builds it specifically around its hardware, which has us eagerly anticipating whatever it has up its sleeves for the series on the Wii. A direct sequel to *Wind Waker*, seafaring elements would again play a strong role, with the stylus being used to plot your journey and jot down notes and reminders on the game map. Couple this with a brilliant story, lush visuals and quirky puzzles and *Phantom Hourglass* maintains *Zelda*'s impeccable handheld lineage.



» *Four Swords Adventures* on the GameCube allowed four friends to link up their GBAs and tier off to do their own thing.



» *Four Swords Adventures* introduced a unique strategy element to the combat of *Zelda*. While teamwork was essential, it soon went to pot once everyone started fighting over rupees.

from the many hours he would spend playing around the rooms of his home as a boy, and the crystal lakes and bountiful greenery of Hyrule from his recollections of exploring the vast fields nearby. Miyamoto's decision to use the name Zelda was inspired by the wife of the American author F Scott Fitzgerald. Famously dubbed "the first American flapper" (the term for a ladette in the Forties), it was her wilful nature that Miyamoto would find so endearing, and persuade him to select her as the muse for the titular princess.

As with *Donkey Kong* and *Super Mario Bros*, Miyamoto would polarise *Zelda*'s story around three central characters: a hero (Link), a damsel (Princess Zelda) and a villain (Ganon). Again it would look to an unusual hero – a young elfin boy – to embark on the quest. Link's involvement in the story comes about after he spots an old woman being attacked and quickly jumps to her aid. He discovers that the woman's name is Impa and that she is a porter to the Princess of Hyrule. He then hears news of the ensnared princess at the nefarious trotters of Ganon and learns of Ganon's evil intentions for the Triforce and the land of Hyrule, and duly agrees to seek out the eight segments of the Triforce of Wisdom and ventures to the top of Death Mountain, where Ganon awaits.

In the first game, the Triforce is described as 'three magical triangles', capable of granting great power to their bearer, but its mythology and origins would continue to evolve throughout the series. Essentially, the Triforce is the catalyst, the object of desire that brings and binds the story and characters together. Inside Hyrule there exists three parts to the Triforce: the Triforce of Power that Ganon acquires during his siege on Hyrule castle; the Triforce of Wisdom, which is the part Link is seeking inside the dungeons beneath Hyrule; and the Triforce of Courage, which would first make an appearance in *The Adventure Of Link*.

The Legend Of Zelda was first released in 1986 on the Famicom Disk System, a secondary disk drive that made use of rewritable disks, which never found a release outside of Japan. In the West the game came pressed on majestic gold cartridges that incorporated an internal battery facility to save game data, and it would become the first game cartridge to do this.

Miyamoto's notion to have the game feel completely bilinear was very apparent. Dropped into a huge overhead world, paved with little direction, it would be left to the player to decipher *Zelda*'s modus through consideration and natural exploration alone, a mantra that actually caused a bout of anxiety in the prolific game designer when the game was eventually released.

"I remember that we were very nervous because *The Legend Of Zelda* was our first game that forced players to think about what they should do next," says Miyamoto. "We were afraid that gamers would become bored and stressed by the new concept. Luckily, they reacted the total opposite. It was these elements that made the game so popular and today gamers tell us how fun the *Zelda* riddles are, and how happy they become when they've solved a task and proceeded with the adventure. It makes me a happy game producer!"

But Miyamoto needn't have worried. Graduating with honours alongside its developmental classmate *Super Mario Bros*, *The Legend Of Zelda* would go on to be hugely successful for Nintendo, eventually grossing sales of 6 million copies.

As with *Donkey Kong*, Nintendo was quick to churn out a sequel while the popularity of the game was still piquant. And a year later *Zelda II: The Adventure Of Link* was released. Although Miyamoto would oversee the game's development, its creation would fall to a new development team, one that would switch the action from overhead to a side-on perspective and bathe it in subtle *Mario*-esque platform undertones – a change that proved to be unpopular with fans of the original. Its structure would remain generally similar to the first, though. It is another 'find several somethings' (nine crystals) to open 'something' (the Great Palace) that holds 'something with wish-granting properties' (the Triforce of Courage) – and this is a structure that has been mirrored for almost every game in the series.

The Adventure Of Link would also introduce a few staples of the RPG genre that would never really take off in the series. Link, for instance, could earn experience points to beef up his attacks, raise his stamina and also obtain magic points to cast spells. However, the game would also introduce village sections, where

The Missing Links

We take a look at some of the *Zelda* titles that slipped through the release net…

The Legend Of Zelda 64
Nintendo 64DD
Originally said to be a launch title for the 64DD, *The Legend Of Zelda 64* was rumoured to have been a weird coaxial of *Ocarina Of Time* and *Majora's Mask*. Long delays and a lack of confidence in the hardware would force Nintendo to cram the game on to a large N64 cart and release it as *Ocarina Of Time* instead.

Zelda: Gaiden
Nintendo 64DD
Rumoured to be a very early sequel to *Ocarina Of Time* that would make full use of the 64DD's advanced memory system, this 64DD *Zelda* project was again switched to standard N64 carts and would be released as *Majora's Mask*.

Ura Zelda
Nintendo 64DD
Picking up where *Ocarina* left off, this add-on pack originally intended for the 64DD was to chronicle Link's mission to find the Triforce. It would later find a release in the form of the *Master Quest* bonus disc and was released with *The Wind Waker*.

The Legend Of Zelda
Game Boy Color
Said to be developed by Capcom's studio Flagship, it's believed that inside the vaults of Nintendo headquarters lives an extremely sought-after GBC port of the original NES game. If this rumour holds water then it's probably the most valuable videogame in existence.

The Mystical Seed series aka Triforce Trilogy
Game Boy Colour
The two games from the *Oracle* series would originally be intended to be a series of three games called the *Mystical Seed* series. They were to be named after the three seeds of Power, Courage and Wisdom. One game was eventually dropped and Flagship would release them as two games.

Zelda III
NES
Apparently, before releasing *A Link To The Past* on the SNES, it's believed that Nintendo was actually working on another *Zelda* game for the NES that was said to marry elements of the first two games. It's believed that its bones were later used to create *Link's Awakening*.





The many legends of Zelda



THE LEGEND OF ZELDA (1986)
The evil pig-faced Ganon has invaded Hyrule Kingdom and kidnapped Princess Zelda. During the siege he steals the Triforce of Power. But it transpires that a cunning Zelda somehow managed to shatter the Triforce of Wisdom and scatter its parts around the dungeons of Hyrule. When Link gets wind of this he vows to collect up the pieces, glue them back together and go and save the princess.



ZELDA II: THE ADVENTURE OF LINK (1987)
Borrowing from *Sleeping Beauty*, Link is trying to wake Princess Zelda from a potent sleeping spell cast on her by a powerful sorcerer. The evil mage is holed up inside the ruins of the Great Palace and has locked the door using magic. It's up to Link to seek out the scattered shards of the Magic Crystal in Hyrule, break the seal, fight a doppelgänger and then restore peace to Hyrule Kingdom.



THE LEGEND OF ZELDA: A LINK TO THE PAST (1991)
Thanks to an evil sorcerer named Agahnim, Ganon has returned from the darkness again – and this time he has a pitchfork with him! Agahnim has also dethroned the king of Hyrule, kidnapped his daughter, Zelda, and opened up a portal to the Golden Land that has allowed a whole bunch of evil to flood in and wreak havoc in the once-peaceful land of Hyrule.



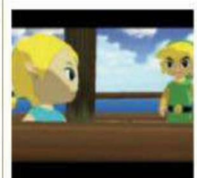
THE LEGEND OF ZELDA: OCARINA OF TIME (1998)
Ganon's back once again in *Ocarina Of Time*, and this time he's up to his old megalomaniac tricks, so Link's on a mission to banish him to the Dark World forever – well, at least until the next *Zelda* release, that is. To do this Link requires the power of the Seven Sages, and to find them he must travel back in time making changes in one time that will have a knock-on effect on the next.



THE LEGEND OF ZELDA: MAJORA'S MASK (2000)
Link is cast into an alternative world known as Termina, a slightly more chic version of Hyrule. But when he arrives he soon discovers that the world, in three days time, will be levelled to dust by its moon. With just 72 hours on the clock, Link must work fast to locate Majora's Mask and save the world and its people from an imminent moon-crushing.



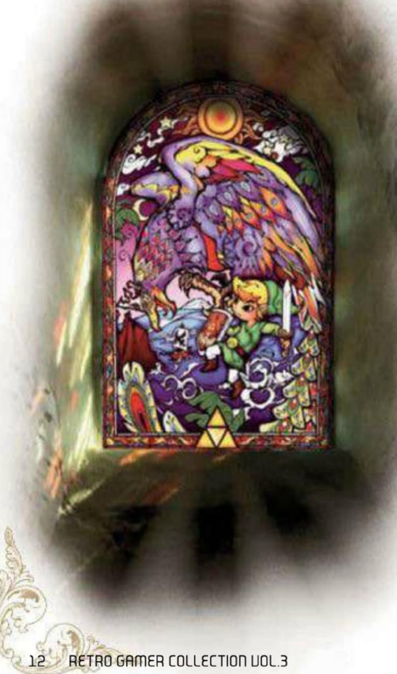
THE LEGEND OF ZELDA: THE WIND WAKER (2002)
In *The Wind Waker* Link is on a mission to rescue his sister, who has been abducted and locked up somewhere by a giant bird. Surrounded by miles of water, and using the power of the Wind Waker, which gives Link the power to change the course of the wind, Link must venture out into the Big Blue and travel to different islands to find out who it is that's holding her captive.



THE LEGEND OF ZELDA: TWILIGHT PRINCESS (2006)
When Link and his friends are attacked by a posse of monsters, Link wakes up to find his pals have been kidnapped. Miffed, he sets off to save them, and steps through the Twilight Realm, where he's transformed into a wolf and imprisoned. He soon escapes, but learns that evil sorcerer Zant is trying to merge Hyrule with the Twilight Realm… spelling bad news for everyone, except for Zant.







Link would need to gather information from locals, laying down a foundation for the many games that would follow.

In 1990, a new Nintendo console was breaking into the market rapidly. An early and pivotal partnership with Capcom – securing the machine ports of both *Street Fighter II* and *Final Fight* – bolstered by an impressive debut by *Super Mario Bros*, would have everyone eagerly anticipating the end of Link's four-year absence from videogames. And Nintendo certainly wouldn't disappoint. Released in 1991, and into a swathe of praise, *A Link To The Past* is cited by many fans as the seminal game in the prolific *Zelda* franchise.

The first two *Zelda* stories were the creations of Miyamoto and fellow game designer Takashi Tezuka. However, for *A Link To The Past*, Miyamoto would enlist the writing talents of producer Kensuke Tanabe. Link's SNES debut would mark a return of the popular overhead look of the first game, as well as introducing some customary tweaks to the visuals and controls. Link could now move diagonally, run with the aid of Pegasus Boots, and the range of his sword attack was also improved. Perhaps the most notable aspect came from the game's deft use of its items. There was the new Hookshot, which Link could use to stun his enemies and pull himself across large gaps in the ground; the Bow, which made an appearance in the first game but is used to greater effect here; and the Magic Mirror, which Link can use to shift between the Light World – a colourful and lush depiction of Hyrule – and the Dark World – a dank and nightmarish vision painted with skulls, oily looking marshes and menacing-looking trees. The game was packed with a dizzying array of side quests, sub-plots and gameplay.

A Link To The Past also marks the first time in the series that the game's three main protagonists – Link, Zelda and Ganon – are not the same incarnations seen in the previous games. It's set hundreds of years before the first game and, as flipping the back of the box states, our heroes are 'predecessors' to the original Link and Zelda, and this time-fudging has been a running theme throughout the series. The *Zelda* trend seems to be for Nintendo to release a *Zelda* game, set it in its own unique time, and then

"For many fans, the series would never better A Link To The Past"

follow it up with a quirky direct sequel. *Zelda II: The Adventure Of Link*, *Link's Awakening*, *Majora's Mask* and *Phantom Hourglass* are all direct sequels that adhere to this thinking. But for every third game, generally, the player will always be controlling a spiritual descendant of Link inside a game set in its own unique time: *A Link To The Past*, *Ocarina Of Time* and *The Wind Waker* again all back up this belief. It explains why it is that there's this peculiar sense that Nintendo is occasionally rewriting its story, and why characters in certain sequels react and communicate like they're meeting each other for the very first time.

For many, the series would never better *A Link To The Past*. And yet, despite the huge swathe of popularity that the game would glean, the Super Nintendo would receive only one Western *Zelda* game in its lifetime. Nintendo would still cash in on the game's popularity in the East by releasing two *Zelda*-based games on its Satellaview system – a peculiar satellite modem for the SNES co-developed by Nintendo and Bandai. The





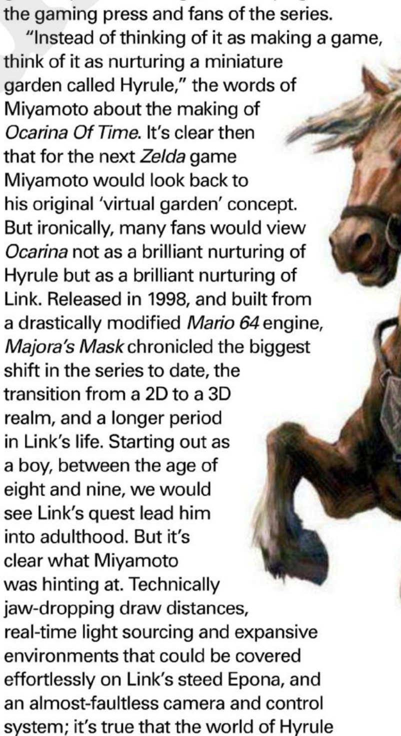
first game, entitled *BS The Legend Of Zelda*, was a downloadable four-part episodic remake of the original NES game, but with a few subtle differences. First, the graphics and music were given a colourful facelift and a few elements of the gameplay – such as having it play out in real-time, and increasing the capacity of Link's rupee purse – were also tweaked. It's often cited as '*The Third Quest*', because of the way it messed with the dungeons, items and the size ratio of the Overworld.

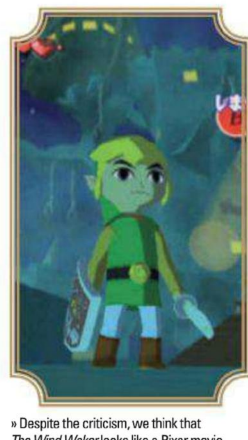
To cunningly boost awareness of the Satellaview, Nintendo would also opt to supplant the system's two mascots – a boy in a baseball cap and a girl with red hair – in the shoes of protagonists instead of Link. In 1997, Nintendo released a follow-up to the game, *BS The Legend Of Zelda: The Sacred Stones*, which again divided the game into four-weekly downloadable chunks. *Sacred Stones* is considered to be side quest to *A Link To The Past*, owing to the look and feel of the game. It retained the two Satellaview mascots as before and would set the player on a quest to find eight pieces of hallowed masonry and defeat a resurrected Ganon. Perhaps the most interesting aspect of the Satellaview games is that, like an interactive television show, they could only be played while the game was being aired. This allowed Nintendo to broadcast hints and tips to the player while they played to help assist them on their quest.

As well as the Satellaview, it was always Nintendo's intention to produce a CD add-on for the Super Nintendo. Sony had developed the sound chip for the SNES (the SPC700) and had experience and grounding in CD technology, therefore, Nintendo's looking to Sony to get the project off the ground was really a case of natural selection. However, as the story goes, Sony was determined to break in to the videogame market itself and had seen an ideal opportunity to do so when that early contract with Nintendo was drawn up. During that deal Nintendo would unknowingly sign an agreement that would give Sony the rights to work on a CD-based console that would run both the planned SNES-CD games and also be backward compatible with SNES carts. In secret, Sony had been working on the console, named the Super Disc, and as that contract would enforce, it would legally play all SNES games. When Nintendo eventually caught wind of this, and realised that Sony would then hold the control, and, it's reputed, profits of all SNES-CD games, it would then side with Sony's rival Philips.

After a messy legal battle, Nintendo successfully found a way to pull out of the contract. But a resolute Sony would simply refine and rework its existing hardware, eventually rolling it out as the Sony PlayStation. After eventually dropping the idea of releasing a CD component for the SNES, Nintendo would give Philips use of two of its IPs for a series of videogames for its CD-i machine. Mario and Luigi would cordially appear in the puzzle game *Hotel Mario*, and Link and pals in three interactive movie-games: *Link: The Faces Of Evil* and *Wand of Gamelon* (released concurrently in 1993), and *Zelda's Adventure* (released a year later). The first two games (*Faces Of Evil* and *Wand of Gamelon*) were side-scrolling action games, à la *The Adventure Of Link*, but spliced with dated-looking cartoon sequences. For *Zelda's Adventure*, the original top-down approach was adopted but the game filled its boots with poorly rendered CG sprites and astonishingly dire blue-screen acting. Not surprisingly, given the games' prolific heritage, the Philips games were lambasted by the gaming press and fans of the series.

"Instead of thinking of it as making a game, think of it as nurturing a miniature garden called Hyrule," the words of Miyamoto about the making of *Ocarina Of Time*. It's clear then that for the next *Zelda* game Miyamoto would look back to his original 'virtual garden' concept. But ironically, many fans would view *Ocarina* not as a brilliant nurturing of Hyrule but as a brilliant nurturing of Link. Released in 1998, and built from a drastically modified *Mario 64* engine, *Majora's Mask* chronicled the biggest shift in the series to date, the transition from a 2D to a 3D realm, and a longer period in Link's life. Starting out as a boy, between the age of eight and nine, we would see Link's quest lead him into adulthood. But it's clear what Miyamoto was hinting at. Technically jaw-dropping draw distances, real-time light sourcing and expansive environments that could be covered effortlessly on Link's steed Epona, and an almost-faultless camera and control system; it's true that the world of Hyrule was never so brilliantly fleshed out.





» Despite the criticism, we think that *The Wind Waker* looks like a Pixar movie.



The Dark, the Pig and the Fabergé egg

HERE'S OUR COMPLETE RUNDOWN OF LINK'S MOST COMMON ADVERSARIES



Dark Link

Appeared as a villain in: *The Adventure Of Link, Ocarina Of Time, Oracle Of Ages, Four Swords Adventures* and *Twilight Princess*.

Dark Link (aka Shadow Link) is an ominous and mysterious villain that makes its first appearance as the final boss in *The Adventure Of Link*. Taking many different guises over the years – he's essentially an evil version of Link draped in darkness with glowing red eyes – little is known about the origins of Dark Link, but if his appearance in *Ocarina Of Time* is anything to go by, then he seems symbiotic. So, if *Spider-Man 3* was factually accurate, we can assume he's an alien from outer space.



Ganon/ Ganondorf Dragmire

Appeared as a villain in: *The Legend Of Zelda, The Adventure Of Link* (Game Over screen), *A Link To The Past, Ocarina Of Time*, the *Oracle* series, *The Wind Waker, Four Swords Adventures* and *Twilight Princess*.

Ganon is Link's first and most prolific adversary. Kicking things off at the end of *The Legend Of Zelda* as a giant pig, he would retain this porky form up until *Ocarina Of Time*, where he would show his true colours, as Ganondorf Dragmire. Ganondorf was the only male born into a guild of women thieves known as the Gerudo clan. Being the only male, he would become the 'King of Thieves' and would lead the Gerudo into taking over Hyrule. Without the power of the Moon Pearl to protect him, the Dark Realm would transform him into a powerful demon who resembles a pig, and he would take vengeance on Hyrule.

Vaati

Appeared as a villain in: *The Minish Cap, Four Swords* and *Four Swords Adventures*.

Vaati is the recurring villain of the *Four Swords* series, who, like Ganon/ Ganondorf Dragmire, appears in many different forms. Beginning life as a lowly Minish – a race of fairy-like creatures – he would betray his master, Ezlo, by stealing his power cap and turning himself into a sorcerer. During the *Four Swords* series he can be seen in his original Minish form, his sorcerer shape and also three different variations of his demonic state, which look like a cluster of Fabergé eggs with demonic eyeballs painted on them. Absolutely terrifying.



The sequel to *Ocarina Of Time, Majora's Mask* (2000) introduced many firsts to the series. Originally titled '*Zelda: Gaiden*' in 1999, it was the first time, inside the main canon of games, that Nintendo would really break its Triforce of Character – the first game to do so was *Link's Awakening* on the Game Boy. *Majora's Mask* doesn't include any physical incarnation of Ganon, although his name is mentioned, and Zelda's appearance is relatively brief in relation to the prevailing games in the series. Beginning life as an intended extra section of *Ocarina Of Time*, had the game been released on the Nintendo 64DD as originally intended, it heavily tweaked the *Zelda* structure and messed with the series' familiar Hyrulian setting. As a result, many fans viewed it as the most jarring game in the series. The graphic style of *Majora* is essentially *Ocarina* refined, with many of the same elements. The biggest difference between the two N64 games is that in *Majora's Mask* Link doesn't age, although there's a mask in the game that makes it possible, and the whole episode is set over just three videogame days. Link's mission is to prevent the destruction of Termina – a slightly more sophisticated alternative vision of Hyrule – from an ominous moon that in three days will destroy the town. With only three 'days' until the game ends, it was necessary for Link to keep travelling back in time to the start of the first day until his quest was complete. Oddly, despite the notion of time travel and rebirth being a strong mantra for the *Zelda* series, some would find it difficult to warm to *Majora*'s confining time-travel structure, and view it as the most linear game in the series.

If there were some fans that found it difficult to warm to the direction of *Majora's Mask*, then the next *Zelda* game was always destined to put a few noses out of joint. After the infamous *Legend Of Zelda* Space World GameCube demo in 2000, which showed an impressively rendered sword fight between Link and Ganon, its sinewy graphical style of an adult Link had many fans believing they were going to get a darker *Zelda* adventure. However, the game they eventually got would look nothing like the teasing demo unveiled to Space World attendees.

Taking the biggest shift in terms of visual style, *The Wind Waker*'s cel-shaded graphics would disgruntle fans who were expecting an epic and mature *Zelda* appendage. Ironically, though, perhaps the biggest shift in the game came from its scrapping of certain *Zelda* gameplay elements. Instead of time travel, *The Wind Waker* uses the wind and the ocean for its puzzle and explorative elements, and rather than one large land to explore, it's split into islands connected by miles of sea that Link must traverse by sailboat. But *Wind Waker* also had a sense of humour and took many aspects from the portable *Zelda* games, with more emphasis on characters and a feeling of being more accessible for newcomers. Its effusive and simple anime-style graphics captured the facial expressions of its characters better than any *Zelda* game before it, going lengths to invoke emotion, a real connection with Link, and cleverly serving as subtle hints to the player to help them solve puzzles. In a bid to perhaps soften that visual blow to its fans, Nintendo would accompany the game with a bonus disc containing the original *Ocarina Of Time* and *Ocarina Of Time/Master Quest*, a more arduous version of the N64 game that was intended to be released for the 64DD.

Perhaps due to its basic look, the next *Zelda* game to appear on the Cube came and went with generally little fanfare.

The A-Z of Zelda

A is for *A Link To The Past*
Link's seminal *Zelda* adventure and a firm fan favourite

B is for *Ballad Of The Wind Fish*
The song that Link must play to rouse the Wind Fish.

C is for *Crossbow Training*
Link's Crossbow Training is a peculiar lightgun spin-off of *Twilight Princess* that comes bundled with the Wii Zapper.

D is for Death Mountain
The home of Link's arch-nemesis, Ganon.

E is for Epona
The name of Link's noble steed.

F is for *Four Swords* trilogy
A series of three spin-off *Zelda* games – *A Link To The Past & Four Swords, Four Swords Adventures* and *The Minish Cap* – that are all linked by The Four Sword.

G is for Ganon
Begins life as a pig with a pitchfork, later games would reveal his true form: Ganondorf Dragmire.

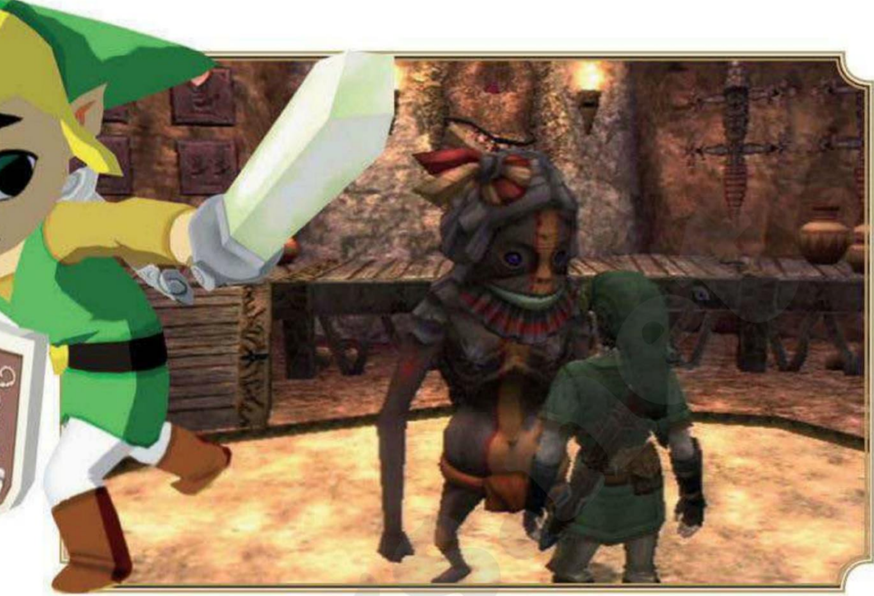
H is for Hyrule
The fictional land where the majority of *Zelda* games take place.

I is for Impa
Impa is the caretaker of Princess Zelda and the old woman that Link saves in *The Legend Of Zelda*.

J is for Jabber Nut
The nut that Link must eat to understand the Minish language.

K is for Koholint
The setting of *Link's Awakening*, marks the first time a *Zelda* game wouldn't be set in Hyrule.

L is for Link
Steadfast, brave and full of gusto, the pointy-eared Link is the saviour of Hyrule.



Developed by Nintendo, *The Legend Of Zelda: Four Swords Adventures* took visual and multiplayer elements from the GBA game, *A Link To The Past & Four Swords* (see 'A Link To The Palm' boxout), and brought an entirely new squad-based dynamic to the series. Slotting weirdly between two Game Boy Advance games, *Four Swords Adventures* would form the second game of *Zelda*'s *Four Swords* trilogy. It allowed one to four players, if you had a linkup cable and knew three people with a GBA, to control four differently coloured Links, position them into various formations and tier off to work together to solve the game's colour and teamwork-themed puzzles. The multiplayer emphasis of the game was further bolstered by a unique battle mode that allowed four friends to select a Link and duel to the death.

And so we reach the final game in our look back at the history of *Zelda*, a game that famously carried the weight of two consoles on its shoulders. After a one year delay, *Twilight Princess* would prove a fantastic farewell to the GameCube, but sadly a tepid and awkward debut for the Wii. With *The Wind Waker*, Nintendo's intention was to make a *Zelda* game that anyone could finish, and as a result many fans would bemoan the game for being far too easy. So Nintendo looked back to *Ocarina* as the blueprint for the style and direction for *Twilight Princess*. Running from a heavily tweaked *Wind Waker* engine, *Twilight Princess* looks to be the polar opposite to its GameCube sibling. In hindsight, it's actually a culmination of ideas and themes from the later *Zelda* games. It clearly borrows from *Ocarina Of Time* in terms of its visuals, adopts the darker undertones of *Majora's Mask*, and boasts the scale and subtle gameplay tweaks of *Wind Waker* – with regard to its cinematic look and continued use of facial expressions.

It was decided, mid-development, that the graphical style of the game would be altered. Early shots of the game showing Link inside a grey and desaturated world would reaffirm to fans that *Twilight Princess* was to be a darker direction for the series. However, the eventual graphical style would shift to a hazy world made of warm serene palettes, but that darker direction was kept. The game also contained more dungeons and more items than *Ocarina Of Time*, as was the intention by Nintendo to finally offer the hardcore *Zelda* fan a game to really test their mettle. While the Wii version is essentially an enhanced port of the GameCube release, the game would actually play out slightly differently: the game worlds were mirrored. Link has always been left-handed in the series, and if you were to look closely, you'll notice that whatever direction Link – which, incidentally, means 'left' in German – is facing, he will hold his sword in his left hand. With the advent of the Wii Remote controls in *Twilight Princess*, Nintendo realised that many players would be right-handed so would make Link enantiomorphic in the Wii version, and the game world would follow suit.

"It has always been important that the gamers grow together with Link" Shigeru Miyamoto

So what is it that makes the *Zelda* series so popular? Why does every new chapter create such an air of excitement surrounding a cloud of high expectations? Why do people meticulously dissect every screenshot, analyse and pore over every *Zelda*-related rumour, and await the next chapter more so than any other videogame franchise to date? Miyamoto sums it up perfectly.

"I think many people dream about becoming heroes. For me it has always been important that the gamers grow together with Link, that there is a strong relationship between the one who holds the controller and the person on the screen. I have always tried to create the feeling that you really are in Hyrule. If you don't feel that way, it will lose some of its magic."



» Yep, even *Zelda* couldn't avoid a clichéd runaway mine section.

M is for Majora's Mask
An evil heart-shaped mask is what Link needs to save Termina.

N is for Nintendo
Nintendo is the creator of *Zelda* and the Walt Disney of videogames.

O is for Ocarina
The flute-type musical instrument that makes its first appearance in *Link's Awakening*.

P is for *Pikmin*
Like *Pikmin*, Miyamoto wanted Hyrule to feel like a virtual garden.

Q is for Quiver
The quiver is the item that holds Link's arrows.

R is for Rupees
The ruby-like currency of *Zelda* that Link can acquire by killing enemies and cutting the grass.

S is for Satellaview
The SNES equivalent of Xbox Live, only released in Japan and home to two *Zelda*-based games.

T is for Triforce
Is the sacred triangular relic that binds the characters and events of *Zelda* together.

U is for Underworld
The term for the underground dungeons beneath Hyrule.

V is for Vaati
Is the villain in the *Four Swords* series. Like Ganon, he takes two forms: a human sorcerer and a giant bat eye with pincers.

W is for *Wind Waker*
Wind Waker was the first *Zelda* game for the GameCube, and marked a dramatic shift in the visual style of the franchise.

X is for X-rated action
It's implied throughout the series that Link and Zelda are romantically involved. If only they could remember.

Y is for Yoshi
Yoshi appears in *Link's Awakening* as a sought-after cuddly toy that Link must win.

Z is for *Zelda: Gaiden*
Was the original working title for *Majora's Mask*.





ZELDA FAMILY TREE

While many of today's popular franchises have stemmed from the PSone generation, a few classics still stand their ground among the likes of *Crash Bandicoot* and *Tomb Raider*. The best-known seem to come from Nintendo – whether it's *Mario*, *Donkey Kong* or *Zelda*, Nintendo is the undisputed champion when it comes to creating long-lasting brands and characters.

Of course, *Mario* is most synonymous with the company, but in recent years the *Zelda* franchise has received the majority of the attention, most likely because of the noise made by *Zelda: Ocarina Of Time* when it finally launched on the N64 after a delay. So which is your favourite? Take a look at the *Zelda* family tree to refresh your memory. You may find a few titles that you didn't even know existed…



THE LEGEND OF ZELDA



1986
NES
Nintendo

Every great series has to start somewhere and for *Zelda* it was with launch of *Zelda No Densetsu* (*The Legend Of Zelda*) on Nintendo's Famicom Disk System. Because it was seen as something of a financial risk, the system never launched outside Japan – instead the game was translated to cartridge and released on the NES.

ZELDA II: THE ADVENTURE OF LINK



1987
NES
Nintendo

While *The Legend Of Zelda* had laid down the foundation for almost every other *Zelda* title, the second game attempted to take the series in a slightly different direction. Rather than the typical *Zelda* viewpoint, much of this title was *Mario*-esque 2D platforming – a change that proved unpopular with many fans of the original.

THE LEGEND OF ZELDA: A LINK TO THE PAST



1991
SNES
Nintendo

Nintendo needed to demonstrate that the Super Famicom (SNES in the West) was superior, in terms of both technology and software, to Sega's Mega Drive, and it certainly did that with the resurrection of the *Zelda* series. A huge, sprawling role-playing game, *A Link To The Past* is considered by many to be the best game in the series.

PHILIPS

LINK: THE FACES OF EVIL

1993
CD-i
Philips

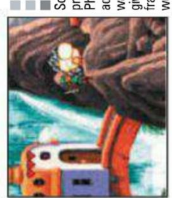
After cancelling its agreement with Sony to create a SNES add-on, Nintendo promptly signed a similar deal with Philips. But it was soon decided that an add-on was a bad idea and this deal was also cancelled. Philips was later given temporary use of the *Zelda* franchise as compensation. Oh, how we wish it wasn't…

ZELDA: THE WAND OF GAMELON

1993
CD-i
Philips

While the title *Faces Of Evil* described how *Zelda* fans looked when they saw what Philips had done with Link, they were even more horrified when they saw how *Zelda* was portrayed on the CD-i. A Barbie-like heroine in a pink miniskirt may have seemed like a good idea to Philips, but for us things couldn't have got any worse… or could they?

ZELDA'S ADVENTURE



1995
CD-i
Philips

If you thought that *Faces Of Evil* and *Wand Of Gamelon* were bad then you'd have been utterly disgusted with this. Although Philips' initial *Zelda* creations featured appealing artwork like that in Terry Pratchett's *Discworld* games, *Zelda's Adventure* was realised through poorly rendered CG sprites and backgrounds, and live-action cut-scenes. Ugh.

BS THE LEGEND OF ZELDA



1995
SNES
Nintendo

Based on the original NES *Zelda*, *BS The Legend Of Zelda* was only ever available in Japan and only on Nintendo's Satellaview – a SNES add-on that linked with a Japanese television system called GIGA and allowed users to download playable games. Sadly, Nintendo shut down the system before gamers could get the last instalments.

SPIN-OFFS

LCD GAMES

1989
Various
Various

It appears that most popular series received an LCD adaptation at one time or another, and *Zelda* is no different. Most famous were the *Zelda Game & Watch*, an impressive effort from Nintendo; and The *Legend Of Zelda* Game Watch, which was created by Nelsonic and saw Link collecting missing pieces of the Triforce.

OCARINA OF TIME/MASTER QUEST

2003
GC
Nintendo

Originally due to appear on the ill-fated 64DD, *Master Quest* eventually turned up as a promotional freebie for *The Wind Waker*. Dungeons are tougher than in *Ocarina Of Time* and also feature different puzzles, so even if you've played the original – also included – you've every reason to do it again. The package also contains videos for various GC releases.

ZELDA: COLLECTOR'S EDITION



2003
GC
Nintendo

Only available in promotional deals, this compilation contains emulated versions of *The Legend Of Zelda*, *Zelda II: The Adventures Of Link*, *Ocarina Of Time* and *Majora's Mask*. While both *Ocarina Of Time* and *Majora's Mask* benefit from being displayed in 480p, the latter has been known to crash. Worth owning if you don't have access to Virtual Console.

THE LEGEND OF ZELDA: OCARINA OF TIME



■ 1998
■ N64 ■ Nintendo
■ With seven years since the last big *Zelda* game, Nintendo had a lot to prove. Many things had changed during that time – including the introduction of 3D graphics – and it was unclear whether the classic *Zelda* formula would work as well as before. Thankfully, after numerous delays, the game managed to surpass almost everyone's expectations.

THE LEGEND OF ZELDA: MAJORA'S MASK

■ 2000
■ N64 ■ Nintendo
■ Although *Majora's Mask* was overseen by *Zelda* creator Shigeru Miyamoto, much of the creative process was handled by a then new team of upcoming designers and programmers at Nintendo of Japan. This, combined with a relatively short development period, raised doubts about the game's quality, but it was great anyway.

THE LEGEND OF ZELDA: THE WIND WAKER

■ 2003
■ GC ■ Nintendo
■ Although some gamers had reservations about the cartoon imagery used in this *Zelda* game, few could deny that Nintendo once again created a must-have title. While the *Zelda* series has often featured the theme of time travel, *The Wind Waker* uses the wind and the ocean as a basis for many of its puzzle and explorative elements.

THE LEGEND OF ZELDA: FOUR SWORDS ADVENTURES

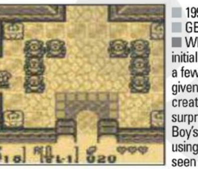
■ 2004
■ GC ■ Nintendo/Capcom
■ Although unlike any other *Zelda*, *Four Swords Adventures* is still a great game that expanded on the connectivity between the GC and GBA. Very linear, with some excellent puzzles, *FSA* is best played with three others. Although the US and UK versions feature the mini-game 'Shadow Battle', another, 'Navi Trackers', was only available on the Japanese version.

THE LEGEND OF ZELDA: TWILIGHT PRINCESS

■ 2006
■ GC/Wii ■ Nintendo
■ Boasting a visual style that screams '*The Lord Of The Rings*' and a brand new control system if you own the Wii version, *Twilight Princess* is another essential addition to Nintendo's venerable franchise. Although often hailed as the greatest *Zelda* of all time, we'd give that accolade to *Ocarina Of Time*, as *Twilight Princess* sadly treads very similar ground.

HANDHELD

LEGEND OF ZELDA: LINK'S AWAKENING



■ 1993
■ GB ■ Nintendo
■ While much of the Game Boy's initial software was fairly simplistic, a few years with the technology had given Nintendo enough knowledge to create an RPG. *Link's Awakening* was surprisingly good considering the Game Boy's limitations – even successfully using the odd side-scrolling section as seen in *The Adventure Of Link*.

THE LEGEND OF ZELDA: LINK'S AWAKENING DX



■ 1998
■ GBC ■ Nintendo
■ Although this was essentially the same as the Game Boy version of *Link's Awakening* released five years previously, a number of amendments had been made. Obviously, there was the inclusion of colour, but more impressive was the way it was used to enhance the game using colour-based puzzles. There was also an extra dungeon.

THE LEGEND OF ZELDA: LTTP/FOUR SWORDS



■ 2003
■ GBA ■ Nintendo/Capcom
■ Thanks to the versatility of the GBA, Nintendo has been able to resurrect the SNES classic *A Link To The Past*. The best part is that not only do you get a carbon copy of the original game, but you also get a brand new four-player link-up game, developed by Capcom exclusively for the Game Boy Advance, in which you and three friends work co-operatively.

THE LEGEND OF ZELDA: PHANTOM HOURGLASS



■ 2007
■ DS ■ Nintendo
■ Despite the delays, Link's first DS adventure was worth the wait. Using the machine's innovative controls – Link is controlled by the stylus – *Phantom Hourglass* features a strong story, excellent and extremely clever puzzles, and some beautiful *Wind Waker*-style visuals. Our only criticism with it is that, like *The Minish Cap*, it's over too soon.

CAPCOM

THE LEGEND OF ZELDA: ORACLE OF SEASONS

■ 2001
■ GBC ■ Nintendo/Capcom
■ Contrary to what you may have heard, *Oracle Of Ages* and *Oracle Of Seasons* were two completely different games. While *Ages* used the theme of time travel to introduce many of its puzzles, *Seasons* used different times of the year to similar effect. By switching between winter, spring, summer and autumn, various routes and secret items were revealed.

THE LEGEND OF ZELDA: ORACLE OF AGES

■ 2001
■ GBC ■ Nintendo/Capcom
■ Nintendo's ties with Capcom in the GameCube era may have stemmed from *Oracle Of Ages* and *Oracle Of Seasons* as they were both created by Capcom, rather than in-house. Sharing many similarities with *A Link To The Past*, *Oracle Of Ages* used time travel to introduce puzzles and themes as the game progressed.

THE LEGEND OF ZELDA: THE MINISH CAP

■ 2004
■ GBA ■ Nintendo/Capcom
■ Unlike most other Zelda games, *The Minish Cap* revolves around the legend of the *Four Swords* – not surprising as the other two titles are by the same developer. It also introduces a talking cap called Ezlo, and the Picori, a race of tiny beings. Puzzles shrink Link down in size and introduce three new items: the Gust Jar, Mole Mitts and the Cane of Pacci.

OTHER GENRES

SUPER SMASH BROS



■ 1999
■ N64 ■ Nintendo/Hal Laboratories
■ Just like Marmite, *Super Smash Bros* was one of those games that you either loved or hated. Either way, no one could dispute that this was a massive success for Nintendo, partly because so many of Nintendo's favourite characters were included. As well as Mario, Donkey Kong, and a range of Pokémon, Link was among the line-up.

SUPER SMASH BROS MELEE



■ 2002
■ GC ■ Nintendo/Hal Laboratories
■ Aside from some very nice visuals, *Super Smash Bros Melee* was really nothing more than an update of the N64 original. Again, there was a heavy emphasis on *Pokémon*, which probably explains why *Melee* is still the best-selling GameCube game in Japan, and again Link appeared, this time with Ganondorf, Zelda and Sheik.

SOUL CALIBUR II



■ 2003
■ GC ■ Nintendo/Namco
■ When Nintendo first demonstrated its GameCube technology, it did so with a beautifully crafted fight scene between Link and his arch-rival Ganon. Although the imagery was never used in a finished Nintendo product, a rumour suggested that Namco would feature a similar rendition of Link in the Cube version of *Soul Calibur II*. And it was true.

SUPER SMASH BROS BRAWL



■ 2008
■ Wii ■ Nintendo
■ *Brawl* is the best game in the *Super Smash Bros* series and nothing has stopped us enjoying it. With plenty of new characters, each with access to a new, highly powerful 'Final Smash' move, the fan service has been cranked up to 11. Throw in online play and you have a game no self-respecting Nintendo fan should be without.

» THE CLASSIC GAME

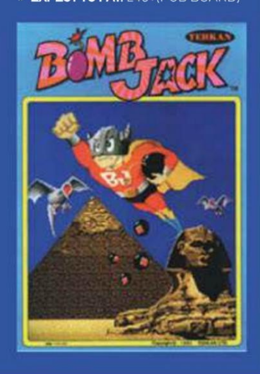
BOMB JACK

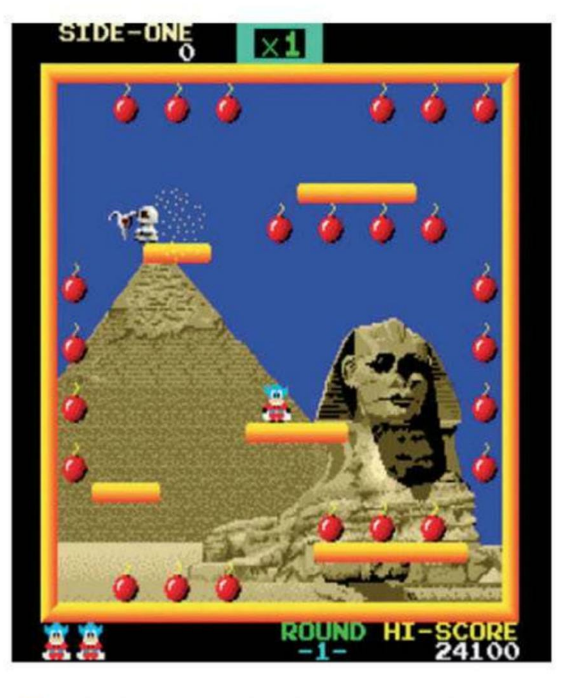
Bomb-disposal-by-touch is a pretty lame superpower, whichever way you choose to look at it. But, back in the Eighties, when the world's tourist commissions were threatened by intergalactic bombers, only one man could come to their rescue…

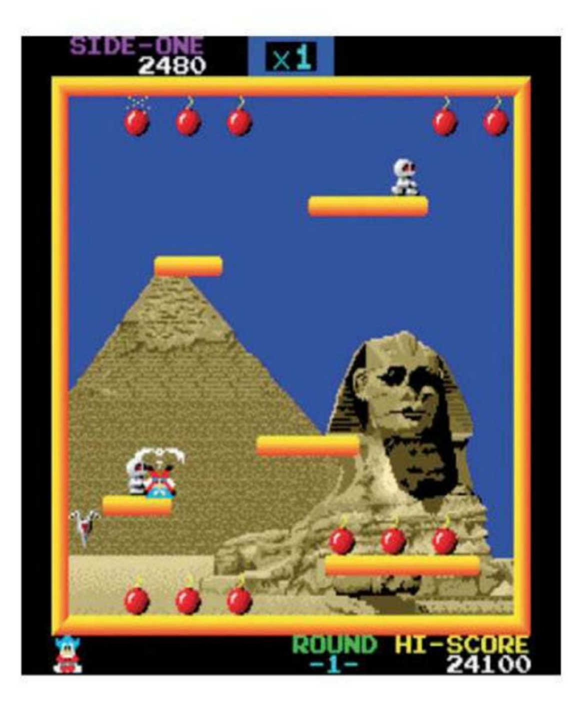
IN THE KNOW



- » **PUBLISHER:** TECMO
- » **DEVELOPER:** IN-HOUSE
- » **RELEASED:** 1984
- » **GENRE:** PLATFORM
- » **EXPECT TO PAY:** £45+(PCB BOARD)







Life changed dramatically for Bomb Jack in 1984. Before then he was simply an underused, unappreciated superhero, living on his sofa and wallowing in self-pity and empty packets of popcorn. Then, one day, his letter box opened. "Hey little buddy, it's Spider-Man here. I'm heading into town with the Green Lantern and we thought that you might wanna come along. You know, get out of the house for a bit?" Jack flicked on the television to drown out his friend's plea. "This just in," squawked the panicky news presenter. "A heinous group of crooks resembling spaceships, birds and mummies have planted numerous oversized bombs at various important landmarks. If there is anyone out there who can help in our plight to stop these indiscriminate abominations, then please call this freephone number immediately…" It took a while to register with Jack. But when it did, he picked up the phone, jumped in the shower and headed for Egypt.

Most will remember *Bomb Jack*. It's not difficult really: a little guy in red spandex darting around a sphinx, avoiding aliens and collecting bombs, is not something you tend to forget easily. But there are always some aspects of classic games that will leave you. The smaller details, its quirks, those little moments of joy that a long hiatus and the visuals of current-gen gaming will help you to forget, and *Bomb Jack* is no different.

While its single-screen setup – showing a famous landmark rebuilt in multi-hued sprites, cluttered with platforms and cartoon bombs – might look dated when perched alongside a NAOMI arcade machine, its gameplay feels anything but. Tecmo's concept of merging the platform and puzzle genre is one of the finest examples of how to create a decent genre mash-up ever. Benefiting from a superhero mascot who holds the weight of the world's tourist trade on his minuscule shoulders, *Bomb Jack* was an arcade game that had character, accessibility, humour and enjoyment by the bucket load.

Like many of its peers, the premise of *Bomb Jack* is simple. Dropped into a level besieged by bombs, the player must help Jack defuse them. To make the mission more arduous, the game throws in a number of intergalactic menaces. These range from mummies that patrol the platforms to metallic birds that will attack and whizzing UFOs that rocket around the screen, acting as annoyingly as possible.

The beauty of the game is that it can actually be played in two very different



» Jack hides outside the compounds of Tecmo HQ for safety.



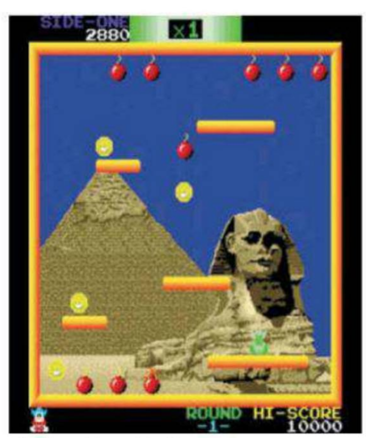
» The bombs seem to explode but they don't leave a mark on the little guy.

"YOU ALWAYS COME AWAY FROM ITS GAME-OVER SCREEN FEELING THAT WHAT YOU'VE JUST WITNESSED WAS SOLELY CAUSED BY YOUR INCOMPETENCE AS A GAMER"

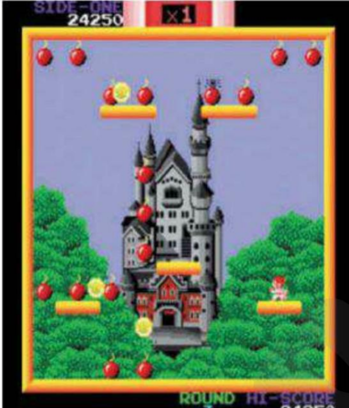
ways. You can choose to quickly dart around the stages, haphazardly hoovering up the bombs, or you can seek them out in the order that they are activated – made apparent by a lit fuse. Opting to go for the bombs in the order they are triggered will gain you the biggest scores, but it also proves the most taxing method of play. While defusing active bombs, they will often deliver the ignition spark to their neighbour, and the swarm of pursuing enemies can make your palms sweaty, reactions hesitant and often steer you into bombs you didn't want to disarm.

Ironically, despite its premise, the point of *Bomb Jack* is not to beat a ticking countdown or finish the stages in the quickest time. The bombs don't actually explode, they just like to imply that they might. So taking your time, drawing enemies into cleared areas and then quickly zipping to the other side of the screen often proves most successful.

To help Jack in his mission various tokens are dropped into play. These can award points, bestow extra lives – sometimes even a whole credit – and turn the tables on the enemies. Plagiarising *Pac-Man*'s power pill, one token will temporarily transform all of the enemies into cheery, yellow faces that Jack can safely collect, earning extra points.



» Um, that can't be good. Can it?




» Should have packed the sun cream for the trip to Germany.

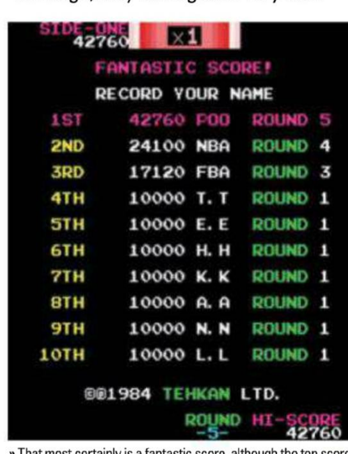
With a lot of collecting and even more avoiding to do within an extremely tight play area, Tecmo had to ensure that the control and collision detection in the game were tighter than a training bra on a sumo wrestler. The controls in the game are polarised around Jack's ability to fly. With height and trajectory influenced by joystick moves – holding up will allow Jack to soar to the top of the screen, while pressing down will reduce his altitude and prevent him overshooting the lower platforms. It's possible to fine-tune landings by tapping fire, allowing Jack to delicately float to the ground.

Finding you're constantly screaming at your avatar for costing you money is a good litmus test to expose a game's good or god-awful collision detection. In *Bomb Jack* you take death's bony finger on the chin and accept his decision with a sigh. You always come away from its game-over screen feeling that what you've just witnessed was solely caused by your incompetence as a gamer. The game's perception of collision is so spot-on that a desperate, evasive slam on the fire button, causing Jack's cloak to brush against the side of a UFO as he takes to the air, will often see the game not register the touch.

Called back into bomb disposal service on two other arcade adventures and a handful of home ports, Jack's superhero tenure was short-lived, but his exploits remain timeless. He now spends his days on his farm in Maine and, ironically, lives just across the road from Bomberman – although, they don't get on very well.



» "Ha, how do ya like that? Stage finished, smoked those robotic mummies, UFOs and birds."



» That most certainly is a fantastic score, although the top score recorded is a colossal 20,101,960.

DEVELOPER HIGHLIGHTS

RYGAR (PICTURED)
SYSTEMS: ARCADE, C64, CPC, ZX SPECTRUM, NES, SMS, LYNX
YEAR: 1986

DEAD OR ALIVE
SYSTEMS: ARCADE, SATURN, PLAYSTATION
YEAR: 1996

FATAL FRAME
SYSTEMS: PS2, XBOX
YEAR: 2001

» He got really miffed when the aliens invaded his making-out patch.

BOMB WHACK

Several home conversions of *Bomb Jack* were released courtesy of Elite. The Amiga and Atari ST versions managed to pretty much capture the graphical look of the game, but where every version fell down was in failing to re-create the superlative gameplay that Tecmo had instilled in the arcade game. Confusingly, every port of *Bomb Jack* has made the little fella look slightly different. The award for the most unattractive has to go to the poor C64 port. Transforming Jack into a chunky monkey and slowing the playability right down to the speed of erosion meant you could sometimes struggle to determine when the loading screen finished and the game began. Yes, we know that's a cruel thing to say. But, unfortunately, it's true. The ports just didn't live up to the arcade original.



THE MAKING OF... MANIC MINER

SAT AT THE VERY DESK WHERE IT WAS WRITTEN, MATTHEW SMITH WATCHES MINER WILLY LEAP THROUGH ALL 20 SCREENS OF HIS SPECTRUM MASTERPIECE. PAUL DRURY HOLDS THE ASHTRAY AND TAKES NOTES

CENTRAL CAVERN

"This was the test screen, the first of everything," begins Matt. "The collapsing floors, conveyor belts, the jumps, the colour clash. Using two colours in the bricks of the solid platforms and then when you jump up on to the first platform, that's all testing for colour clash. It has one of all the difficult jumps in, too." 'How was difficulty determined?' we ask. "From the end of the conveyor belt to the higher platform counts as a difficult jump… but I put in a safety net. I plotted it out on graph paper: two pixels and then a parabolic acceleration down until you hit terminal velocity, at about four pixels a frame, then you started falling straight down. I'd do all the testing and see where you'd land." And what about the clockwork baddie on the conveyor belt? "Oh, just something I'd drawn. There's a bit of *Yellow Submarine* in him – that's where the mouth in the belly came from. The original sketches I did had water instead of conveyor belts. There were going to be streams of water and I was thinking about making it impossible to go backwards. That would make it more of a puzzle – working out how to get somewhere without going upstream – but by the time I started coding, they'd become conveyor belts."





THE COLD ROOM

Matt stares intently at the 'keys' on this level. "They're snowshoes. Well, tennis rackets." He then starts tapping the screen before we gently remind him it isn't a touch screen. "Mmm, oh, right. I was just thinking about tweaking a pixel. I'm not sure if it would be better light or dark. I must have tried it both ways back then." Ever the perfectionist. And what about the shuffling birdies? "Everyone knows penguins are fully signed up members of the funny animals union." As Willy slowly descends the 'chimney', Matt chirps up, "For disintegrating platforms, I used the video memory of the Spectrum. It was the first machine I had with a bitmapped screen." We note that the Cold Room level is considerably easier than the previous one. "Oh, I didn't do the screens in order. No, I did the first screen first and then I think I made some attempt to sort the rest out and give a graduated gameplay. That's why the first screen is disproportionately hard, because it wasn't part of that scheme."





THE MENAGERIE

Matt scans the collection of creatures on screen. "Here we've got spiders, emus… well, ducks or something. Yeah, they're flying! Well, their feet are coming off the ground. They're having a go! Hang on, there are only two kinds of animal in there. That's a bit lame. There should be at least three before you call it a menagerie!" Matt's French may be questionable, but we wonder if the birds do signify another sort of love, that of a man for his footy team? "Yeah, you could see it as a tribute to Liverpool FC. They're not far off being liver birds and I'm definitely a red shirt."



ABANDONED URANIUM WORKS

Matt denies this is a comment on the nuclear paranoia of the Eighties, though it did play on a very real fear. "It's a room full of difficult jumps and you have to go across it more than once. It was supposed to be scary, about testing your confidence." He starts to contemplate the nature of death. "Miner Willy is two characters high and if you fall four characters you're dead. Two, you're safe and three… hang on, was two deadly? Oh, I can't remember…" His memory works better when recalling how he coded Willy's famous leap. "The first two frames, you go four and four pixels, that's one whole character, then it's three, three, then two, which makes eight pixels and a whole character. Then 2, 1, 1, 0, 0, -1, -1, -2, -2… it's a smooth curve rounded to the nearest integer." He grins and inhales deeply. And the performing seals? "Oh, I think that was because I had a six-pixel rotating ball and thought, 'How am I going to make this into a character? I know, I'll stick a seal below it!'"

EUGENE'S LAIR

So to the memorable snapping bogs of Level 5. "I was telling my little brother Anthony about the toilet monster that reaches up and grabs you. Yeah, he really believed there was a green monster that lived down there," chuckles Matt maliciously. Not a comment on fellow coder Eugene '*Wacky Waiters*' Evans' career going down the pan, then? "I'd met Eugene a few times. We were passing acquaintances. He'd hit the press before me and he played the media darling far more thoroughly than I did. Must have been jealousy, because he was working for the 'other' company, Imagine, and I was still aligned with Bug-Byte when I was doing this. And they were buying flash cars first and writing good games second. Actually, I'd have got more trading in a smashed-up sports car than I've had from any residuals." Are those gold bars Willy is collecting? "Nah, they're supposed to be stacks of credit cards. I had a choice of putting in a line to show they're stacked."

MANIC MINER

PROCESSING PLANT

An obvious homage to the arcades of Matt's youth. "Yeah I used to play *Pac-Man* at the Unit 4 cinema in Wallasey." ("Don't look for it, it's not there any more" – *Spinal Tap*, ed). The addition of legs was a feeble attempt to avoid copyright infringement, perhaps? "Oh, I think we were all relying on the American 'fair use' provision, though thinking about it, that didn't actually exist in British law at the time. No, there were spare pixels free at the bottom. It had to be ten pixels wide to make it scroll smoothly and because it's round, it's got to be ten high, when everything else is 16, hence the legs." We note the level requires some tricky traversing along platforms with restricted headroom. "Yeah, I was designing routes by this time. I usually tried to get you to go across the screen as many times as possible, which makes things more interesting," cackles the evil genius.



MINER WILLY MEETS THE KONG BEAST

Another nod to the New Brighton arcades he frequented as a lad. "Barrels, bananas… I should have put hammers in and it would have been a complete tribute to *Donkey Kong*," he notes. It includes some testing jumps – "Yeah, some fives on this," Matt confirms, referring to the width of the gap in characters, "and they had to be pixel perfect." – and the first appearance of switches, though flipping both wasn't obligatory. "Maybe that was a mistake," muses Matt. "Maybe you were supposed to flick it to finish the level and I just completely forgot to test it." Then he has an epiphany. "Ah, no! The only violence in the game is completely optional! That's for if you feel a pathological compulsion to kill the Kong Beast. I think I was just being a hippy…" He adopts a 'Neil from *The Young Ones*' accent, which is not hugely different from his real voice: "You don't have to kill the monkey, man!"





THE VAT

Given Matt's on-off relationship with money over the years, we wonder if this is a reference to the Inland Revenue? "Nah, just a huge block of collapsing floors," he assures us. "Pure aesthetics, really, and no extra code needed. These collapsing floors were supposed to be one thing and I was seeing what else they could be. That's serendipity, that." And what of the kangaroo connection? He exhales and ponders for a while. "Erm, kangaroo meat? Dog food factory? Dunno… could be… random thoughts." With all the disintegration, it must have been an awkward screen to test? "With The Vat, I had my route and tested it over and over again. I didn't really know if there were any other routes. Some of these levels I've only ever done once, to this day. Same principle with the Banyan Tree in *Jet Set Willy*. There's no random numbers in the game. Every time you go into a level, you get the same start positions and speed, so if I can do it once then it's going to be a bit difficult for the good players." That's something of an understatement, Matt. "Quality control," he winks back.



WACKY AMOEBATRONS

"Yeah, a straight horizontal grid, innit," observes Matt of one of the game's more traditional levels. But are those bog brushes on wheels? "Ah, because your collisions with the sprites are pixel perfect, here I was testing what shapes you could clear. Willy was always 16 pixels high, but different widths at different points during a jump. I was testing the limits, so I made it as tall and thin as possible. I think I was going to make it go up and down so you could only jump over it at certain times, but then I worked out that even at the full height a sprite could be, you could still get over it if you timed it right – this was the level where I was finding that out." It's also the first level to undergo a change when *Manic Miner* was re-released through Software Projects. "Yeah, the amoebatrons were originally the Bug-Byte logo, so I changed them when I left. Didn't need any legal advice on that one!"





ENDORIAN FOREST

Those creatures look uncannily like Ewoks. Endor was their home planet and *Return Of The Jedi* was released the same year as *Manic Miner*. Let's take a wild guess and say you were a *Star Wars* fan, Matt. "I was that week! Went to see it, came home and stuck this screen in. Would I be a Jedi or Sith? Oh, Jedi! In fact, I put that on the last census as my religion." At this juncture we suggest a pause to replenish the Guinness and empty the ashtray as we're on screen ten and so halfway. "Nah, this is screen nine," Matt protests. We assure him we've reached double figures. "Oh, sorry. I always start counting from zero." You can't take the hex out of the boy…





ATTACK OF THE MUTANT TELEPHONES

The title is a reference to fellow coder, Jeff Minter. "I met Jeff a few times, when we won Golden Joysticks. We got on all right. Talked about music and stuff." We recall you said you liked this screen during your appearance on Iain Lee's TV documentary *Thumb Candy*. "Those phones are probably my favourite. Do you wanna see a photo of the actual phone they were modelled on? A BT 300 series." Matt goes upstairs but returns empty-handed. Quite a busy screen, this. Was there a limit to the number of enemies you could include? "Yeah, four going up and down and four going left and right. Hang on, I think you could change that to eight going up and down or left and right. I think I did that on certain screens. The Skylab Landing Bay… But yeah, eight was the limit. Due to memory. And speed. There's only so much you can draw before everything slows down. So make eight a constant and you don't have to worry about it!"

RETURN OF THE ALIEN KONG BEAST

Alien because of the pulsating head, we assume, Matt. He squints at the screen. "Yeah! It is going in and out!" Matt simulates the throbbing with his hands and this seems to trigger the memory of a little coding quirk. "I gave all the screens literal numbers, so, like, if you were using one of those editors that came out, this screen would always have to have a Kong Beast in. Every screen had to share the same code – I couldn't do 20 different programs – so I'd have flags and if it was one of those screens and another test was passed, whatever it was, Kong, Eugene or whatever would go to the bottom of the screen and stay there." We watch Willy plunge to collect the final banana before landing safely in the exit. "Do you have to get there before Kong does? No? Oh, I suppose I was playing with you a bit with that," grins Matt.





ORE REFINERY

"Are those lumps of ore? Probably," says Matt. "And you'd imagine a skull and crossbones not to be the target, but it is!" Despite Willy holding one over his shoulder on the cover of the second edition of the game, this level has one of only two ladders that appear in the game. It also has a lovely blinking eye. Any significance, Matt? "Oh ore!" he cries, cryptically. We admire Willy's well-timed, 'no going back' dash to the exit. "Oh yeah, you could've played for ages and get it wrong with that. Ha! I'd draw the platforms on graph paper and put arrows in where… No, no I didn't," he says, correcting himself. "I didn't use graph paper for *Manic Miner*. I wrote an editor on the Tandy for it. I wasn't using graph paper for level design, I was painting them in and playtesting them. I'd do a bit and see if it was possible to get past that. Then I'd add the next bit." And so his masterpiece evolved…

THE MAKING OF... MANIC MINER

SKYLAB LANDING BAY

This level was always our undoing. The random falling objects instilled such panic in our young fingers. "Nope, it's all in a set sequence," Matt explains. "If you tape record this screen, it should be the same on every version. You can learn the pattern." His mind moves on to higher things. "Skylab was launched the year before and it crashed and burned… for the usual reasons. I don't know what they're going to do with the International Space Station when they can't afford to refuel it. I reckon they'll send it off into a higher parking orbit when they're finished with it… too big to crash and burn." Erm, and the keys on this screen? "Oh, they're computer chips." I notice Matt's fingers are twitching and then he starts making plinky plonky noises, while indulging in some inspired 'air gaming.' He still loves his baby…



THE BANK

We both smile at the rubber cheque on this screen. "Oh, cheques bounce," says Matt, ruefully. The ladders are back, too. "Yeah, that's a trellis. Left and right are the same character. I think you could only use eight different characters on each screen. Or was it four? *Jet Set Willy* was four, I think. That was even more primitive in some ways. The keys were stored separately. Were they? I can't remember. No, no they weren't. You could have a room full of 'em. The ladder was made from reusing a trellis character. There's no flipping in this: the line has to be up the middle. If they're flipped, they have to be stored twice in memory. You bit flip it and it's a completely different number. Flipping is an expensive operation on the Spectrum. Well, horizontal flipping is. Vertical is okay. That's just a memory location." We nod and hope you coders followed all that.



SIXTEENTH CAVERN

"I'd run out of names. Or maybe I was thinking in hexadecimal and thought it didn't need one," says Matt. And what are those enemies? "Flag bugs! In the code. If flag bug equals…" He thinks for a while. "Did they do anything special? No? Perhaps they were meant to. The graphics weren't saved as files; it was done by numbers. I was putting it into video memory. I laid out the levels using the editor but I was doing the graphics on graph paper. I didn't have BOUGIE (Byte Orientated Universal Graphics Interactive Editor) then. A thing I wrote that let me run through four frames of animation, forwards or backwards. Skylab is an exception. They have eight frames for the explosion, but the normal was four." And the keys? "That was an attempt at credit cards," he says. We note the need to collect the key nearest the exit last, lest poor Willy be trapped with a depleting air supply. "It's not good to have tricks like that. Sometimes you can't resist it," he beams.





THE WAREHOUSE

"This was another experiment that I thought was so impossibly hard it would do nicely as a killer… a boss level!" he explains with a malevolent cackle. "I only ever completed this once [Pedants' note: last time we met he confessed to never having completed it]. "Now I've had more practice maybe I could do it in half a dozen goes. With moving things and collapsing floors it's very hard to measure whether something is possible. Because everything is pre-determined, if it's possible once, it's possible for everyone. That's the only way you can really know that you're not on a bum steer." The lawn mower threshers on this level changed into the Software Projects 'Impossible Triangle' logo at the same time the Bug-Bytes were ditched. Or at least, that was the plan…





AMOEBATRONS' REVENGE

The tentacles are back in a reprise of Level 9, though they now seem to resemble the invaders from *War Of The Worlds*. "I thought they were jellyfish but yeah, maybe they have evolved into a higher life form," muses Matt. The difficulty has also grown. "This screen has all the different speeds the enemies can move at, up to four pixels a frame. I did the same sort of thing in *Jet Set Willy* for the kitchen but split it over two screens."



SOLAR POWER GENERATOR

Was this a sign of your growing environmental awareness, then, Matt? He has a wild, far-off look in his eye. "No more than any other rational person. I'm worried about the environment, man…" he answers in that Neil voice. "I think this is one of the brightest backgrounds. Up until now, I think I'd only done one of the four dark colours. Mainly black." Nice solar-ray effect. Was it tricky to create? "Ooh, highly technical," he laughs. "Nah, just a little bit of code. Easy enough to program. One character wide, go down and if it hits something, go that way – always at a right angle. The Spectrum can only do right angles in colour. Get it bouncing around. They'd call it artificial intelligence now. Doesn't kill you but it sucks your air down when you're in the beam. It's sort of complicated and you do run out of air, but it's not a particularly hard level." We can't be the only ones to strongly disagree…



THE FINAL BARRIER

We're almost home. And with the sun setting romantically over the lake, it never looked sweeter. "Yeah, I'm playing around with colour clash here. The graphics are sort of better. I had more freedom because there wasn't any interaction. If you're on screen 20, put the title screen graphics on the top half and you don't have to worry about 'em. I did do this screen on graph paper, then cut it up into characters and worked it out in hex in my head. No art packages or scanners back then!" Is that a lucky horseshoe signifying the final exit? "Nah, it's omega – the end!" And the fish and dagger that rewarded the heroic few? "Oh, just things I'd drawn that were only eight pixels high and sixteen across and I hadn't used in the game," he says casually. But, Matt, at the Screenplay Festival a few years back, and admittedly after a few beers, you went on about its religious connotations, that it was your attempt to give gaming a "little bit of folklore"? He takes one last drag of his roll-up. "It might have," he smiles. "You'll find out in my next broadcast…" Ah, if only…





RETROINSPECTION

SINCLAIR ZX81

IT'S BEEN SAID THAT THE ONLY DIFFERENCE BETWEEN STUMBLING BLOCKS AND STEPPING STONES IS THE WAY YOU USE THEM. FOR SINCLAIR RESEARCH, THE SHORT-LIVED ZX81 SERVED ITS PURPOSE AS A STEPPING STONE TO THE ZX SPECTRUM SUPERBLY, AND PROVIDED A SOLID PATHWAY INTO THE WONDERFUL NEW WORLD OF HOME COMPUTING FOR A GENERATION OF GAMERS

It was only on the shelves for two years, but the ZX81 made a significant, if dichotomous, impact between 1981 and 1983, inaugurating a huge number of curious technophiles into the previously prohibitive world of home computing. Without this ostensibly minor upgrade to the ZX80, the extraordinarily prolific 8-bit revolution that quickly followed might well have known a significantly smaller congregation.

When discussing historical relevance it feels somehow trite to reduce matters to monetary concerns, but in the case of the ZX range of computers, the price tag genuinely was a momentous achievement for Sinclair Research. Home computing in the late Seventies and early Eighties presented a monumental financial investment that was entirely supported by a niche customer base. Computers weren't the necessary, easily justifiable home appliance they are today, so anyone wanting to dabble in the new world of amateur code had to dig deep into threadbare pockets to satisfy their curiosity.

While other manufacturers vindicated their product's astronomical costs with impressive, bullet-pointed lists of powerful processing capabilities, Uncle Clive aimed to astonish with a simple, lightweight price tag, and it was this distinctly British philosophy that put the ZX80 – the first machine to crack the £100 price barrier – into so many homes only a year before the ZX81.

All the astute pioneers in the computing and videogaming world during this embryonic phase knew the importance of affordability. Silicon was electronic gold, and if computer designers wanted to reduce costs they had to lighten the loads on their PCBs. At precisely the same time as Sinclair Research was pouring its talents into ridding excessive hardware, across the Atlantic Nolan Bushnell was offering huge incentives to Atari's designers to reduce chip count in new games. It was exactly this line of minimalist thought that had prompted Steve Wozniak to reinvent *Breakout* and to create the Apple computer. It was no coincidence that those early campaigners made such a massive impact on the future of domestic computing and gaming: they all paid careful consideration to our wallets.

Steve Vickers, designer of the improved ZX81's 8K ROM, vividly remembers just how important this business model was at Sinclair Research, and told us what it was like during those early days around Clive Sinclair's offices.

"It was interesting to see the commercial pressures that drove the products. Launch dates were very important," he begins. "The dates were those of particular exhibitions, and this meant that the deadlines were fixed externally. Hardware design was largely governed by using every possible, and often ingenious, means to reduce chip counts and production costs. Clive himself was exquisitely alert to these issues, and in a sense the nature of the actual product was secondary to him."

This was the real, hidden strength of the ZX81 over its chip-heavy predecessor, and the reason it was an admittedly underpowered yet

Processor: Zilog Z80	
CPU Speed: 3.5 MHz	
RAM: 1K	
ROM: 8K	
Resolution: 64x48 (24 lines x 32 characters) – also capable of 256x192	
Colours: Monochrome	
Sound: None	
Retail Price: £69.95 ready built (£49.95 in kit form).	
Release Date: 1981	

Why the ZX81 was great: It was cheap as chips; a physical checklist of fixed problems and subtle tweaks to the ZX80, with 30 quid shaved off the price. "Why not buy a ZX81?" was the motto of bedroom programmers everywhere.

INSTANT EXPERT

Less than a tenth of the cost of the Apple II on its launch, the ZX81 was (proportionally) the most affordable home computer ever produced.

The ZX81 used a proprietary form of BASIC, so costs were reduced as no licence fee went to Microsoft.

Programs and games could be saved and loaded through a standard cassette tape recorder – something the ZX80 was unable to do.

A unique, 'spark' (*not* thermal) printer was available that used black, aluminised paper to zap the text on to. Just like the computer, this was cheap and cheerful.

By cleverly confusing the ZX81, programmers have devised ways to 'trick' the system into providing a high-resolution display of up to 256x192 – even though Clive Sinclair had initially said that it was impossible.

Solder-happy punters could save themselves 20 quid by purchasing the ZX81 in kit form and assembling it themselves.

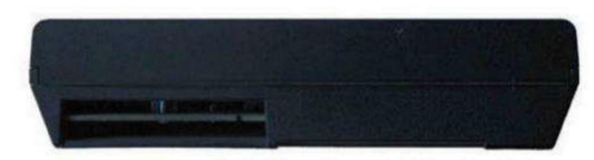
Third-party developers released additional add-ons, including memory packs up to 63K, and graphics and sound modules.

Although not really reflected by the profits Sinclair Research recorded, the ZX81 sold around 1,000,000 units worldwide. They didn't all work, unfortunately.

A chess program was written that ran comfortably within the limited 1K of RAM – one of the smallest examples of a chess program ever seen.

The ZX81 could multiplex between the display and running a program – solving the ZX80's problem with a flickering screen.

SINCLAIR ZX81


» The thin PCB was all there was to hold the peripherals in place – no wonder the RAM pack enjoyed such a free lifestyle.


» The ZX81 in its cheaper, slightly less cheerful (unless you're into soldering) form.


» Although the ZX80 had its charms, the black ABS casing of the ZX81 was a big hit among design-conscious technophiles of the day.

highly accessible computing warhorse. While the ZX80 housed over 20 different ICs under its thin plastic skin, the ZX81's brainpan was emptied of all but four vital chips, one of which was a custom IC compiling the majority of the ancillary functions into one slab of silicon. Of those four digital workhorses, the ROM was perhaps the only one that remained almost completely unaltered, though its development continued with a doubling of capacity up to a whopping 8K. As the man behind the re-engineering of the ZX81's nervous system, Steve explains not only the advancements of the ROM, but its intricate similarities to its parent's.

"John Grant's 4K BASIC for the ZX80 was a miracle of compaction," he says. "As far as possible I left its design and code intact and added the new ZX81 features to it in a modular way. I started by learning the Z80 assembler, which I'd never used before. The first task was adding a floating point maths package, which was big but fairly self-contained. I had to do some research into the Chebyshev polynomials I used for calculating functions, and devised a stack-based internal language to describe the algorithms. This was both compact and easy to program compared with raw assembler code. That was when I had to begin to understand the old system better in order to see how it needed modifying to integrate it with the old ZX80 system."

While Steve might speak a language better understood by an EPROM burner, it's easy to decipher that Sinclair Research had found precisely the right man to increase the capabilities of this new system. Indeed, Steve rather astutely approached the augmentation of the ZX franchise precisely as Clive intended to sell it – by way of upgrade and home industry.

It's fair to say the ZX81 was an upgrade, rather than a successor. This isn't the criticism it appears to be, however, since that was precisely the design brief Sinclair Research had drawn up. After all, it'd go completely against the economic nature of the ZX range to ask people to replace a 12-month-old computer. Steve told us about the ZX81's ROM design process that was carried over into the market place.

"One design remit was that the ZX81 ROM should also work as an upgrade in the ZX80 hardware. In essence the brief was to make a cheaper ZX80 with display *and* computing capabilities and floating point maths. Other additions included more versatile graphics for printing and plotting at specified places on screen, multi-dimensional and string arrays, substring operations, software to drive the Sinclair printer, miscellaneous enhancements to the BASIC and anything else useful that would go in the extra 4K of ROM," says Steve.

Sinclair's already happy punters could buy the massive new 8K ROM along with the slightly altered replacement keyboard membrane. While it didn't solve all the shortcomings of Sinclair's first ZX computer, the upgrade option was well received and worked particularly well, since the ZX81 had been deliberately designed to operate this way.

"To test the code I'd blow it into EPROMs and plug it into the hardware. Eventually we used the ZX81 hardware as it reached a working level of its development, but initially we used a ZX80 to test the new ROM out," Steve explains.

Unfortunately, this upgrade didn't solve the ZX80's issue with simultaneous computing and displaying. Or lack of it, to be more precise – causing a screen flicker every time the laboured processor took an input or ran a program. The ZX81 managed a suitable workaround of the problem by allowing programs to run during the frame return period when the display, being your old Bakelite telly, was refreshing, and also during the blank top and bottom 'borders' phase of the display driver. While this essentially didn't fix the problem, it did prove to be an ingenious method of multiplexing the industrious Z80 processor and giving users the illusion of simultaneous display and computing without the seizure-inducing screen blanking that made its predecessor so 'special'.

Naturally, this resource-sharing slowed the processor quite considerably, despite making the monochromatic screen look a lot better during use. The ZX81 was a limited system even by 1981's standards, so gaming was never really an intended function and full programmer access took greater priority than entertaining casual users. Therefore, it was reasonably concluded that hackers should have a choice between pretty displays and full processing power, so the ZX81 incorporated two methods of operation – esoterically named FAST and SLOW.

FAST put the Z80 processor to use in the same method as the ZX80 – blanking the display so it could dedicate itself to calculating, while SLOW multiplexed the required operations between video and software. While it eased the eye strain of regular coders, this wasn't a particularly significant modification to the ZX lineage, though the inherent reason for including this option *was* significant. Few computers have been made that allowed such unrestricted access to every single function as the ZX81, and inspired programmers soon found alternative use for many of the machine's processes.

The ZX81 had no audio capabilities, though it's unwise to add a full stop after that 'fact'. Early in its life, some surgical code boffin realised that by switching rapidly between FAST and SLOW modes, tones could be induced into the television signal creating a basic

"AS THE US VIDEOGAME MARKET DISAPPEARED UP ITS OWN... CARTRIDGE SLOT, BRITISH CODERS SIMPLY CHOSE THEIR NEW WEAPON OF CHOICE: SPECTRUM, COMMODORE OR AMSTRAD"

Time For Timex

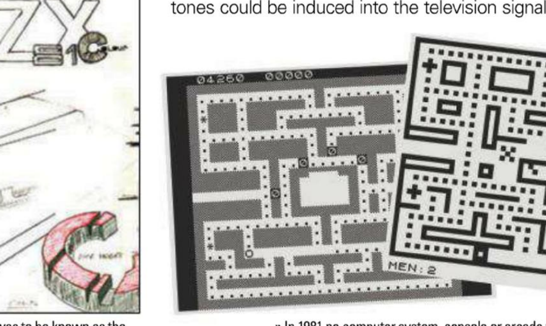
The US was *the* market for home computers, and Americans were seemingly happy to throw whopping amounts of green around to get the right system. Sinclair got a taste of the transatlantic potential through international mail order, and realised a local licensee was required. Since American computer giant Timex was already assembling Sinclair machines at its plant in Dundee, it was the natural choice. The first system to bear the Timex/Sinclair hybrid brand was the TS1000: a ZX81 with double the memory (an astronomical 2K!).

Although the launch was a massive success on paper – selling in numbers that dwarfed Commodore, Apple and Tandy sales figures – posting out the ZX81 to code-hungry Americans had significant drawbacks. The lack of support, gremlin-infested quality control and long, hostile journey meant that only a third of Sinclair's computers actually arrived in operational condition. Reputation meant everything, and Sinclair's was tragically shot when it landed on US shores.





» Before it became the Spectrum, the revolutionary upgrade to the ZX81 was to be known as the ZX81 Colour, as this early design concept shows.



» In 1981 no computer system, console or arcade was complete without *Pac-Man*, although the unofficial clone, *Glooper*, was a better rendition on the ZX81.

COMMUNITY – THE BEST ZX81 WEBSITES

Planet Sinclair

www.nvg.ntnu.no/sinclair/

Not only a great place to learn more about the ZX series of computers, their peripherals and localised alternatives, Planet Sinclair is also a well-presented repository of all things to do with Uncle Clive – from calculators and mini-TVs to electric bikes and the man himself.



A Profound Journey

www.apj.co.uk/zx81/zx81.asp

Although not specifically a Sinclair website, a reprint of a 1981 article from *Personal Computing World* can be found here. The magazine article features an in-depth test and review of Clive's new machine that provides a superb window to what people expected of the ZX81 on its release.



Open Directory Project

www.dmoz.org/Computers/Systems/Sinclair/ZX81/

Although it's tempting to make more specific mention of the websites here, it'd be a lot more useful to post this links list for anyone wanting to uncover the ZX81's presence on the web. Some links aren't maintained, but you should still start here.

ZX81 Stuff

www.zx81stuff.org.uk

Simon Holdsworth's neat website is his own personal shrine to Sinclair's machine and features a great many items from his very own collection. If that wasn't enough, it's even possible to play a great many games using a Java-based emulator, just like on World of Spectrum.





The ZX81 +2

What good is a home computer without the vital add-ons that made the machine live up to the inevitably optimistic hype of its own adverts, and to the end, the ZX81 had a particularly indispensible accoutrement.

While the infamous 16K RAM pack expanded the horizons of the ZX81 exponentially, the physical presence of the memory unit caused significant brain-ache for users. With easily corroded, solder-coated contacts and no other physical support, the slightest nudge could cause a poor connection and loss of function, and even a blown motherboard. Sinclair's own product support suggested the use of Blu-Tack or electrical tape as an official fix.

sound synthesiser. Essentially, this was controlled interference, but it became the primary use of the two processing modes.

In hindsight it's not entirely obvious what Sinclair Research wanted to achieve with the ZX81. It might not have reached the lofty market penetration of the consoles of the day, but for a product that saw a limited sales push and equally limited after-sales support, it begins to draw a picture of a machine that provided a learning curve stanchion rather than a culmination of computer development.

As Steve Vickers still vividly remembers, Clive Sinclair boasted far-reaching vision and wasn't a man to dedicate himself to chasing pound notes. "At first I was shocked to discover that Clive had no interest at all in being able to use the Sinclair computers himself. 'I don't know how to drive one of those things', he'd say. But that was how the company worked. He relied on being able to gather other people who could take care of those issues," says Steve.

Sinclair Research had always skirted around the circumference of colossal success, never quite achieving the kind of corporate enormity that other, usually US-based, computer companies had managed. Therefore, each product was a test of promise and risk in equal measure, and the slow start of the ZX81 suggested no indication of triggering a home computing craze. Launch sales proved the computer to be a worthwhile experiment, but its long-term value was certainly debatable.

"Commercially, the ZX81 worked as a way to earn money on the learning curve to the Spectrum," says Steve, as he recalls the time when Uncle Clive's third computer hit the shelves. "The ZX81 still had obvious deficiencies: the picture was black and white with very blocky pixels, it was slow if it had to compute while displaying, and the 1K RAM was tiny even by the standards of the day, so I don't think it was ever seen as a long-term product."

Steve makes an excellent point, and essentially captures the essence of what made the ZX81 so great. It *wasn't* a particularly impressive computer, but it did epitomise the forthcoming technology revolution. Despite a less than extraordinary specification, the very reasonable price tag and alluring system accessibility made it an easy and risk-free introduction to programming for the inquisitive technophile. By 1982, this simple appeal of low-cost experimentation had increased Sinclair Research's profits eightfold but, far more importantly, it was also proving to be the vital education for both the manufacturer and the user that would launch the next phase in home computing.

» The ZX80 Lite: This is the ZX81's incredibly neat PCB after the custom chip replaced the majority of silicon on its predecessor's motherboard.

"If you wanted to write letters and do accounts on a computer, the ZX81 was not your best buy. But as something really cheap that would let you play with programming – a kind of software version of a Meccano set – there was nothing to touch it. I personally found it really useful for numerical calculations that I needed to do while working on the Spectrum ROM," explains Steve. "So I suppose I found it good for what computers were invented for: numerical work."

As the US videogame market disappeared up its own… cartridge slot, the British code junkies shrugged their shoulders without concern. Consoles were dead, but we now had affordable, accessible home computing to fall back on, so we simply and organically chose our new weapon of choice, be it Spectrum, Commodore or Amstrad. For those of us looking to play with a bit of code and enjoy a bit of gaming on the side, it really was as simple and casual as that.

But it is thanks to stalwart, unsung heroes like the ZX81 and its pioneering developers that home computing had already moved beyond novelty to become an integral part of working-class life, so show a little respect next time you need to wedge a door open and use an Atari 2600 instead, eh?



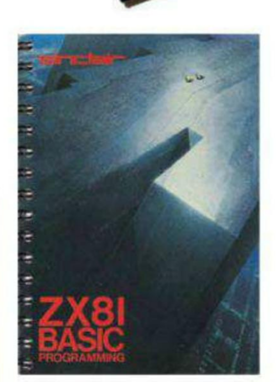
» The aluminised paper might have been a bit of an inconvenience, but the ZX81's printer was a compact and efficient piece of kit.



» It might be an unwholesome travesty, but it's not impossible to see from the shape why disgruntled ZX81 users found alternative use for their computer when the door wouldn't stay open.



» Picking up commercial games for the ZX81 wasn't easy, but there was a ton of programming books that played to the real purpose of Clive's awesome little machine.



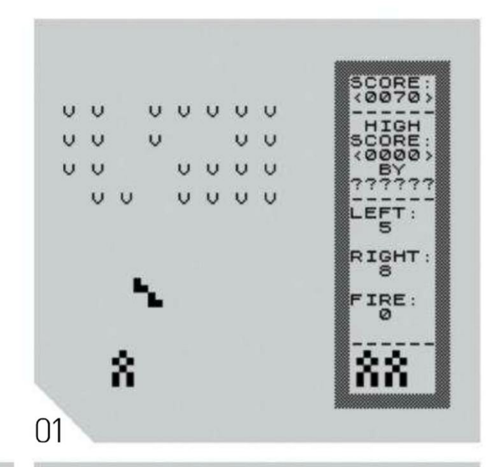
» The ZX81 programming bible was written by the ROM programmer, Steve Vickers. Check it out in its entirety here: **www.worldofspectrum.org/ZX81BasicProgramming/**



SINCLAIR ZX81

PERFECT TEN GAMES

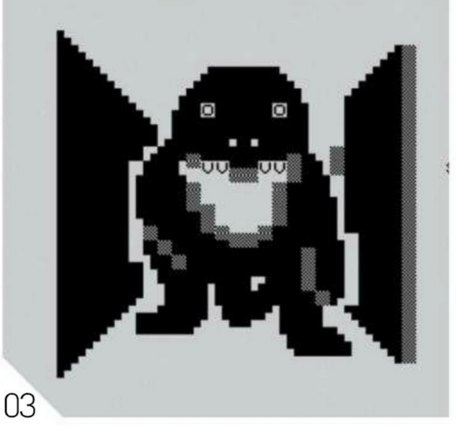
Be it ever so humble, there was nothing quite like the ZX81. So, to celebrate this early computer we've chosen ten of its greatest games for you to enjoy.



01



02


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GALAXIANS

» **RELEASED:** 1982
» **PUBLISHED BY:** ARTIC
» **CREATED BY:** WILLIAM J WRAY
» **BY THE SAME DEVELOPER:** GALAXY WARRIOR

01 **There's a slew of *Space Invaders* and *Galaxian* clones available on the ZX81 – hardly surprising when you consider the massive popularity of them – but this conversion of *Galaxian* by Artic is easily one of our favourites.** The action is absolutely relentless and you'll have your hands full dodging the many flying enemies and the hail of bullets they constantly bombard you with.

Granted, it lacks the same attack patterns from the original game, but, in a way, the complete randomness of the alien attacks simply adds to the excitement, as you never quite know what to expect. This is a superb clone of the hit coin-op and is definitely worth tracking down if you love a good blaster.

1K ZX CHESS

» **RELEASED:** 1983
» **PUBLISHED BY:** ARTIC
» **CREATED BY:** DAVID HORNE
» **BY THE SAME DEVELOPER:** ESPIONAGE ISLAND

02 **Considering the sheer number of potential moves available in chess, we're amazed to find it so well replicated on the ZX81.** Created with less than 1K of RAM, you can play it without the need for a RAM pack. Okay, so certain rules – queening, castling and en passant capture – didn't make the cut, but this is still a resoundingly solid effort and proves just how talented early coders – in this case, David Horne – actually were.

The computer AI takes a fair amount of time to plan all of its moves, but the actual game itself plays a pretty good game of chess, so you can forgive it for the lengthy pauses. A solid adaptation of the classic strategy game.

3D MONSTER MAZE

» **RELEASED:** 1981
» **PUBLISHED BY:** JK GREYE
» **CREATED BY:** MALCOLM EVANS
» **BY THE SAME DEVELOPER:** CATACOMBS

03 **Survival horror may have been a phrase first coined by *Resident Evil*, but it could've easily applied to Malcolm Evans' massive hit.** Boasting sensational visuals and an incredibly slick maze, traversing the huge labyrinth was truly terrifying and scared a generation of gamers.

It may have sported a paltry 16K of RAM and no sound, but *3D Monster Maze* remained an amazingly atmospheric title, which, in a way, was elevated by its clumsy control system that saw all the arrow keys laid out on a single row. An instant classic that, even today, remains a truly mind-blowing experience. Perfect proof that you don't need state-of-the-art visuals to create a truly great game.

FLIGHT SIMULATION

» **RELEASED:** 1982
» **PUBLISHED BY:** SINCLAIR RESEARCH
» **CREATED BY:** PSION
» **BY THE SAME DEVELOPER:** CITY PATROL

04 **Ask people about their favourite ZX81 game and *Flight Simulation* almost always charts highly – usually in the number one spot**.

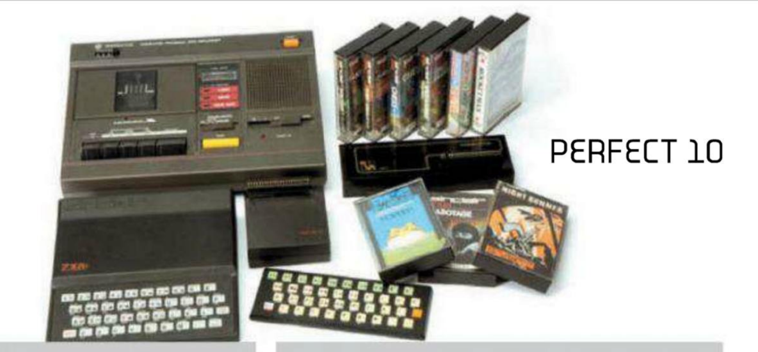
Maybe it's because you'd sit there making engine noises as your plane flew towards its landing strip, but we'd say that it was mainly due to the fact that it simply looked astonishing on a machine that normally required you to guide an asterisk through a simple-looking maze. While it was possible to just play the exhilarating final approach, it was just as fun to simply take to the skies – you could add wind for an extra challenge – and just fly around to your heart's content.

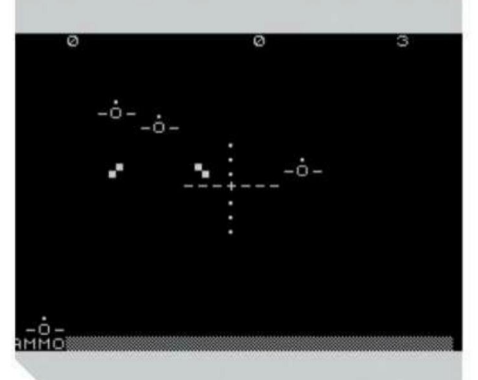
NIGHT GUNNER

» **RELEASED:** 1982
» **PUBLISHED BY:** SOFTSYNCH
» **CREATED BY:** DIGITAL INTEGRATION
» **BY THE SAME DEVELOPER:** ALIEN INVASION

05 **Who would've thought that a game made entirely of '–' and '0' signs could turn into one of the ZX81's most enjoyable games?** No, we wouldn't have thought so either, but replaying the wonderful *Night Gunner* reaffirms that this is exactly the case.

Moving at a very impressive speed, you fly through the air taking out as many enemy planes as you can before your ammo runs out. Like many ZX81 games it's incredibly simplistic to look at, but our active imaginations easily saw those basic characters as magnificent planes plummeting earthwards as we filled them full of lead. A solid shooter that gave you plenty of bang for your money, even if you couldn't hear the bangs.





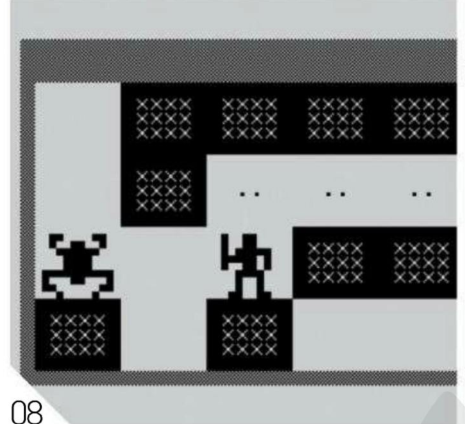
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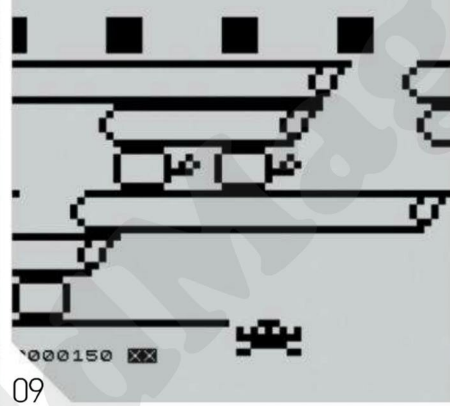
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3D DEFENDER

» **RELEASED:** 1981
» **PUBLISHED BY:** JK GREYE
» **CREATED BY:** JK GREYE SOFTWARE
» **BY THE SAME DEVELOPER:** BREAKOUT

06 **Like *Night Gunner, 3D Defender* has you controlling a pair of crosshairs and trying to gun down as many enemies as possible.** Unlike *Night Gunner*, however, *3D Defender* is set in space and features some absolutely massive UFOs that really do scare the absolute bejesus out of you as they zoom in and out of your view.

It's certainly a lot trickier to control than *Night Gunner* – you'll spend your first few goes crashing into the ground at every opportunity, and the collision detection is rather iffy – but once everything clicks you'll discover a title that's just as much fun and a hell of a lot slicker. And you really have to see those UFOs. Fantastic stuff.

BLACK CRYSTAL

» **RELEASED:** 1982
» **PUBLISHED BY:** CARNELL
» **CREATED BY:** CARNELL
» **BY THE SAME DEVELOPER:** VOLCANIC DUNGEON

07 **Not to be confused with the Jim Henson movie starring ugly puppets, *Black Crystal* is a great graphic adventure that sees you traversing a variety of different environments to destroy the gem of the title.** Spread across six impressive-looking maps, you're given a variety of tasks ranging from retrieving keys to fighting dragons.

It's a very entertaining romp that plays up well to the strengths of the ZX81 and delivers a truly immersive experience that many other adventures on the machine simply can't match. It's a little fiddly in places, and it's all too easy to die, but the gripping gameplay will constantly push you forward for one more go.

MAZOGS

» **RELEASED:** 1982
» **PUBLISHED BY:** BUG BYTE
» **CREATED BY:** DON PRIESTLEY
» **BY THE SAME DEVELOPER:** MANIC MINER

08 **When Don Priestley's *Mazogs* appeared on the ZX81 it's fair to say that its arrival was something of a revelation.** Featuring absolutely huge characters and set in a massive maze, it was an incredibly slick release that made virtually all its peers look absolutely archaic.

With so many maze games featuring dollar signs being chased by asterisks, the huge sprites of *Mazogs* (created by the Sinclair's Sugar Cube Graphics) certainly left an impression on people. Luckily the game was just as good as its visuals, and many ZX81 owners will, no doubt, fondly remember hurtling through the huge mazes, picking up treasures and using their sword to battle the evil Mazogs.

FROGGER

» **RELEASED:** 1981
» **PUBLISHED BY:** CORNSOFT
» **CREATED BY:** CORNSOFT/SEGA
» **BY THE SAME DEVELOPER:** N/A

09 **Fans of *Frogger* will rave about this excellent arcade conversion, but here's another reminder as to why it's so great.** First released in 1981, *Frogger* is not only an incredibly and impressively faithful conversion of the popular coin-op, but it also pelts along at a fair old speed.

Honestly, you'd be forgiven for thinking it's running on another, more powerful, machine. Granted, the original arcade screen has been split into two – the first section has you crossing the road, while the second sees you hopping to your pad across the river – rather than a single screen, but this is otherwise a fantastic conversion that proves just what feats were possible on the humble home micro.

THE GAUNTLET

» **RELEASED:** 1982
» **PUBLISHED BY:** COLOURMATIC
» **CREATED BY:** COLOURMATIC
» **BY THE SAME DEVELOPER:** N/A

10 **Considering the rather flaky processor beating away inside the heart of the ZX81, it has churned out a fair few nippy shoot-'em-ups in its time.** *The Gauntlet* is a perfect example, and while it's nothing we've not seen before – it's basically a clone of Konami's excellent *Scramble* – it is a very slick product that manages to push all the right buttons.

It certainly takes quite a while to get used to the huge size of your spaceship, but once you've worked out all of the controls you'll soon be shooting and bombing enemy emplacements with ease. It does get ridiculously tough as the game progresses, but if you're looking for a classy blaster you'll be hard-pressed to find anything better than *The Gauntlet*.



ZX81 and the rest…

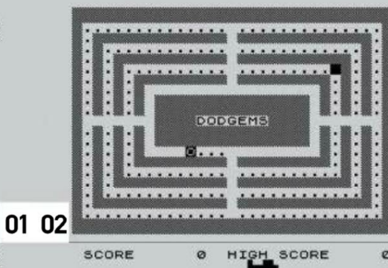
Replaying some of these old games was enough to start weeping huge nostalgic tears of joy. See how many of the following games you can get through before you succumb to the same thing

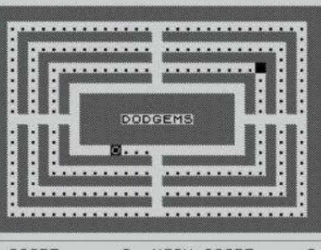




01 ALIEN DROP-OUT
02 DODGEMS
03 HANGMAN
04 ZARAKS
05 KONG'S REVENGE
06 MONSTER MINE
07 ROCKET MAN
08 TAI
09 BOMBER
10 FROGGY
11 WARLORD
12 NIGHT GUNNER
13 SABOTAGE
14 GHOST HUNTERS
15 3D DEFENDER
16 ASTEROIDS
17 UFO
18 ALIEN RAIN
19 HOUSE OF DEATH
20 RAM RUNNER
21 WALK THE PLANK
22 3D MONSTER MAZE
23 LUNAR RESCUE
24 ALIEN
25 MARINE RESCUE
26 SCRAMBLE
27 BAT CAGE
28 FORTY NINER
29 PINBALL
30 ZUCKMAN
31 BREAKOUT
32 DAMPER/GLOOPER
33 FLIGHT SIMULATOR
34 NAMTIR RAIDERS
35 OCEAN TRADER
36 KEYS TO GONDRUN
37 ADVANCED FINANCIAL MANAGER
38 WORDPLAY 1
39 BACKGAMMON
40 FORTRESS OF ZORLAC
41 FOOTBALL LEAGUE
42 INVASION FORCE
43 KRAKIT
44 PELOPONNESIAN WAR
45 SEAWOLF
46 COSMIC GUERILLA
47 TEMPEST
48 THRO' THE WALL
49 GULPMAN
50 MICRO MOUSE GOES DE-BUGGING
51 CENTIPEDE
52 SUPER MAZE
53 PIONEER TRAIL
54 JD ARCADES
55 FAMILY QUIZ
56 BANK ROBBER







01 02



HANGMAN
ANIMALS
HERE IS YOUR WORD:
E E A E
ENTER A LETTER
DUD LETTERS:
K F M

03

SCORE 0 HIGH SCORE 0



SCORE:00

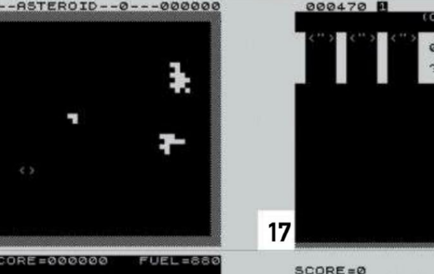
08 09

SCORE> 250 HIGH> FROGS>1
TIME

10







PRODUCED BY J.K.GREYE SOFTWARE
FORWARD RADAR X2
ALTIMETER PROXIMITY
SHIELD 1 SCORE 00000

000045---2---ASTEROID--0---000000

15 16

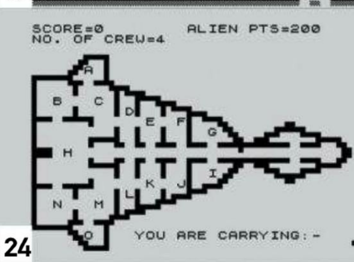
000470 PLAYER 1
BEST 000000 BY ??????

17

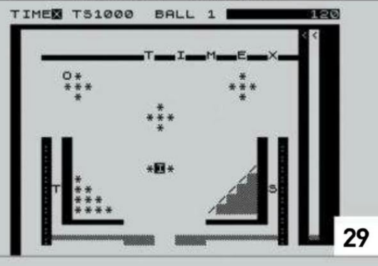
ROLL UP,ROLL UP,
SEE THE AMAZING
TYRANNOSAURUS REX
KING OF THE DINOSAURS
IN HIS LAIR.
PERFECTLY PRESERVED
IN SILICON SINCE
NEW GENERATION SOFTWARE
COPYRIGHT M.E.EVANS

SHIP=2 SCORE=000000 FUEL=660

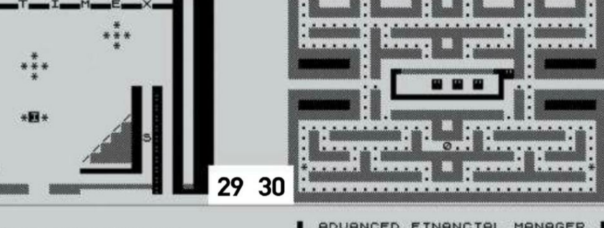
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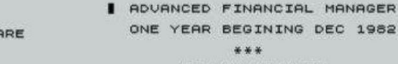


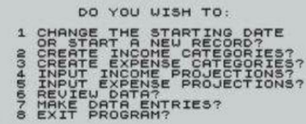
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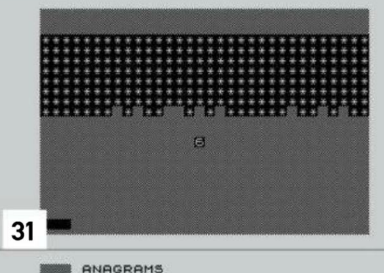






SCORE> 20 HIGH> LIVES> 2

29 30



31

YOU ARE IN A LARGE CAVE AND
THREE HUGE DAISIES WITH LEGS ARE
DANCING TO SOFT MUSIC
YOU MAY
DANCE ALONG WITH THEM
PLAY A TRUMPET IF YOU HAVE ONE
CREEP PAST
KICK THEM

ADVANCED FINANCIAL MANAGER
ONE YEAR BEGINING DEC 1982
***
DO YOU WISH TO:
1 CHANGE THE STARTING DATE OR START A NEW RECORD?
2 CREATE INCOME CATEGORIES?
3 CREATE EXPENSE CATEGORIES?
4 INPUT INCOME PROJECTIONS?
5 INPUT EXPENSE PROJECTIONS?
6 REVIEW DATA?
7 MAKE DATA ENTRIES?
8 EXIT PROGRAM?
PRESS NUMBER 1-8

36 37

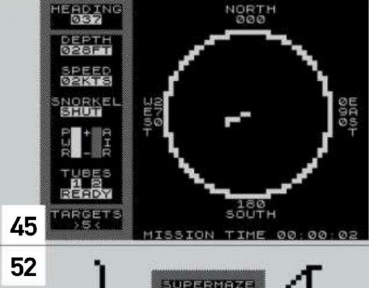
ANAGRAMS
CHOOSE A SET OF WORDS
A COLOURS
B PLACES IN BRITAIN
C EUROPEAN COUNTRIES
D FOODS
E THINGS TO WEAR
F FLOWERS
G ANIMALS
H TREES
I BIRDS
J A MIXED BAG
OR PRESS 0,
TO ENTER YOUR OWN WORDS

38





43 44



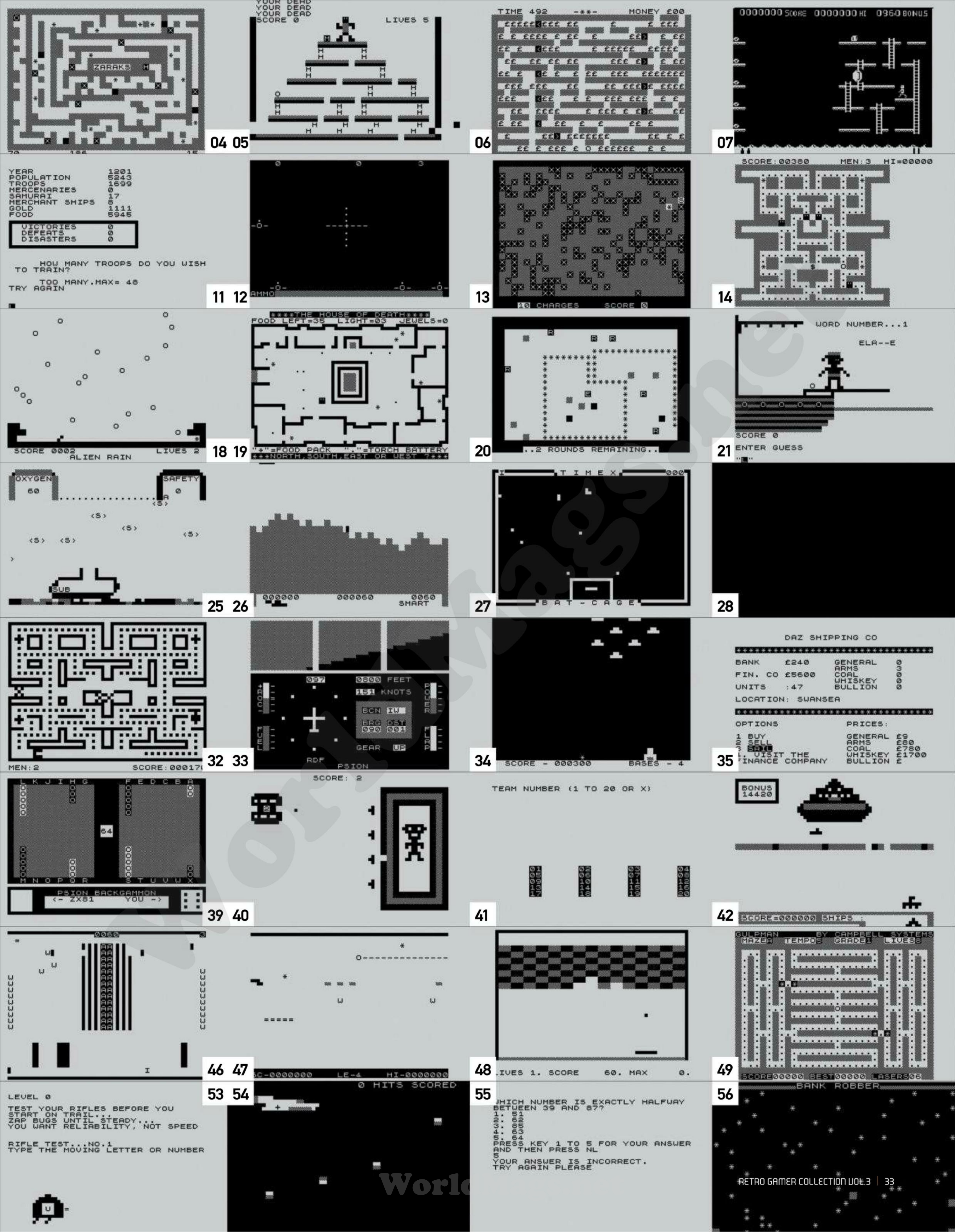
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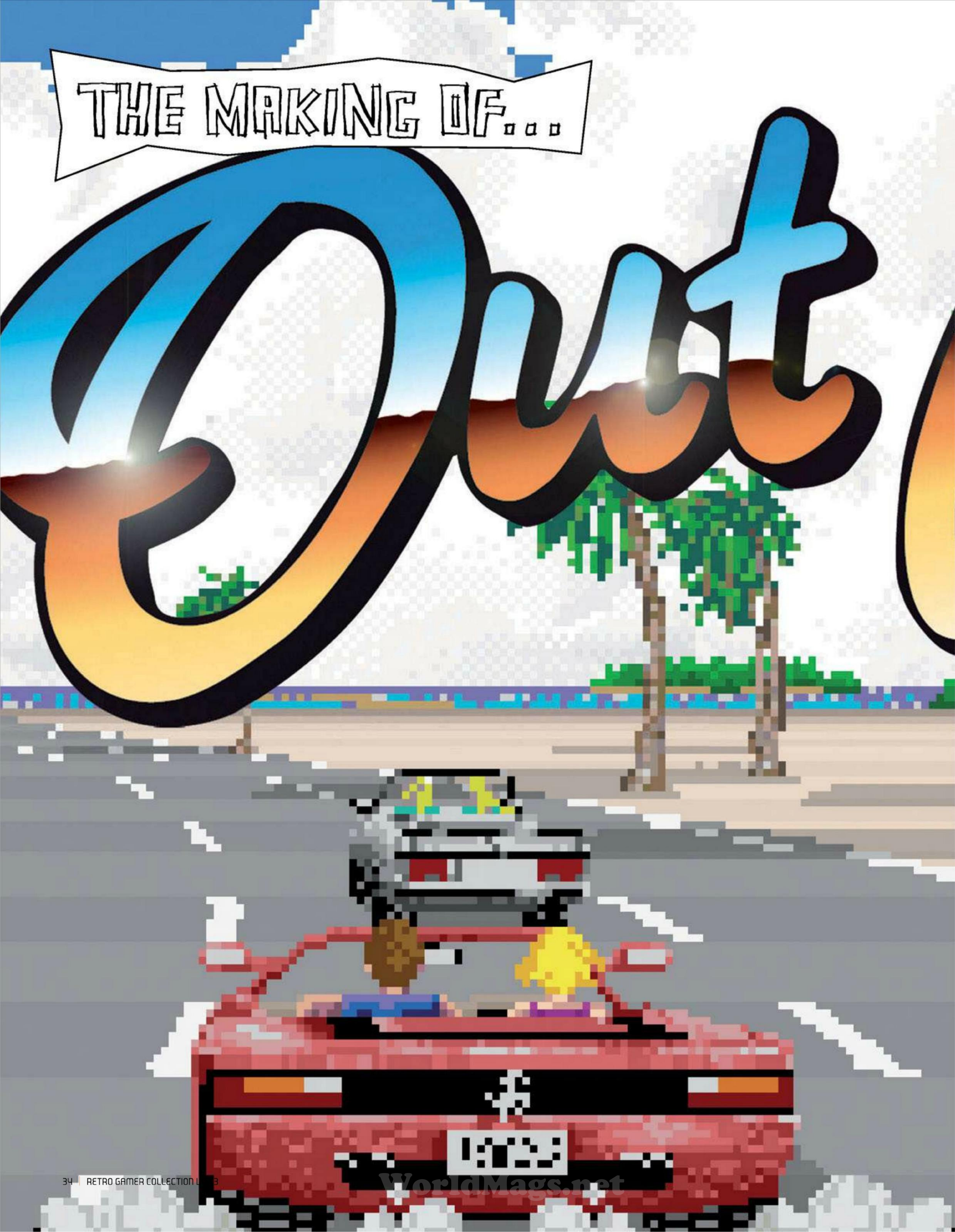
SCORE 00000 HI 00000 LEVEL 01
SQUIRTMETER
10 FOR N=1 TO 20
20 PRINT TAB 9;"WELL DONE"
30 NEXT N
40 PRINT "PRESS A KEY"

50 51

52




04 05 06 07 11 12 13 14 18 19 20 21 25 26 27 28 32 33 34 35 39 40 41 42 46 47 48 49 53 54 55 56
ZARAKS
YOUR DEAD
YOUR DEAD
YOUR DEAD
SCORE 0
LIVES 5
TIME 492
MONEY £00
SCORE
HI
BONUS
YEAR 1201
POPULATION 5243
TROOPS 1699
MERCENARIES 0
SAMURAI 17
MERCHANT SHIPS 8
GOLD 1111
FOOD 5945
VICTORIES 0
DEFEATS 0
DISASTERS 0
HOW MANY TROOPS DO YOU WISH TO TRAIN?
TOO MANY.MAX= 48
TRY AGAIN
AMMO
10 CHARGES
SCORE 0
SCORE:00380
MEN:3
HI=00000
SCORE 0002
ALIEN RAIN
LIVES 2
****THE HOUSE OF DEATH****
FOOD LEFT=35
LIGHT=03
JEWELS=0
"+"=FOOD PACK
"."=TORCH BATTERY
NORTH,SOUTH,EAST OR WEST ?
..2 ROUNDS REMAINING..
WORD NUMBER...1
ELA--E
SCORE 0
ENTER GUESS
OXYGEN
60
SAFETY
0
SUB
SMART
T I M E X
B A T - C A G E
MEN:2
FEET
KNOTS
GEAR
UP
RDF
PSION
SCORE - 000300
BASES - 4
DAZ SHIPPING CO
BANK £240
FIN. CO £5600
UNITS :47
GENERAL 0
ARMS 3
COAL 0
WHISKEY 0
BULLION 0
LOCATION: SWANSEA
OPTIONS
1 BUY
2 SELL
3 SAIL
4. VISIT THE FINANCE COMPANY
PRICES:
GENERAL £9
ARMS £80
COAL £780
WHISKEY £1700
BULLION £
PSION BACKGAMMON
<- ZX81
YOU ->
SCORE: 2
TEAM NUMBER (1 TO 20 OR X)
BONUS
14420
SCORE=000000
SHIPS
LE-4
HI-0000000
LIVES 1. SCORE 60. MAX 0.
GULPMAN
BY CAMPBELL SYSTEMS
LEVEL 0
TEST YOUR RIFLES BEFORE YOU START ON TRAIL...
ZAP BUGS UNTIL STEADY...
YOU WANT RELIABILITY, NOT SPEED
RIFLE TEST...NO.1
TYPE THE MOVING LETTER OR NUMBER
0 HITS SCORED
WHICH NUMBER IS EXACTLY HALFWAY BETWEEN 39 AND 87?
1: 61
2: 62
3: 65
4: 63
5: 64
PRESS KEY 1 TO 5 FOR YOUR ANSWER AND THEN PRESS NL
5
YOUR ANSWER IS INCORRECT.
TRY AGAIN PLEASE
BANK ROBBER


THE MAKING OF...
Out



JONTI DAVIES MEETS YU SUZUKI – LEGENDARY GAME PROGRAMMER, FERRARI OWNER AND PART-TIME PHILOSOPHER – TO DISCUSS SEGA'S MOST ICONIC DRIVING GAME, THE 1986 CLASSIC THAT IS OUTRUN

Yu Suzuki joined Sega in 1983, and his first assignment was *Champion Boxing* on the SG-1000. From there, his progress began to gain momentum. By the end of 1985 he had already established himself at the vanguard of coin-op development, having masterminded a couple of major successes for Sega in the form of *Hang-On* and *Space Harrier*. But Suzuki's journey towards becoming a legendary videogame producer was about to shift to a higher gear, and it was the following year's *OutRun* driving game that turned Suzuki into an internationally renowned programming superstar.

Before a brief diversion to code the thrilling sci-fi blast of *Space Harrier* in time for a December 1985 release, Suzuki's attention was first centred on the racing genre. The result of Suzuki's initial drive was *Hang-On*, which appeared in Japan's arcades in July 1985: a high-speed bike racing game where players literally felt as though they had to hang on to the coin-op cabinet's handlebars. Part of Suzuki's motivation for *Hang-On*'s production was a desire to see to it that Sega overturn Namco as Japan's leading manufacturer of racing games, and while *Hang-On* was a superb title – and one that radically altered Sega's image – he accepted that his first racing game alone hadn't been sufficient for Sega to overtake its main rival, the developer of *Pole Position*. Namco was still synonymous with driving games; Sega was being lapped. Suzuki wasn't fond of repetition, so instead of producing another bike racing game he opted to create the car driving game that would become *OutRun*.

Well, that's one side of the story. The other, less weighty but equally important reason for Yu Suzuki's determination to create *OutRun* came from a Burt Reynolds flick, as he confesses to us: "The main impetus behind *OutRun*'s creation was my love of a film called *The Cannonball Run*. I thought it would be good to make a game like that. The film crosses America, so I made a plan to follow the same course and collect data as I went. But I realised, once I'd arranged everything, that the scenery along the [pan-America] course actually doesn't change very much, so I revised my plan and decided to collect data in Europe instead…" Although *Cannonball Run* clearly had a great influence on Suzuki's work with *OutRun*, the game also bears what must have been a coincidental similarity to the euphoric scene in *Ferris Bueller's Day Off* – also a 1986-vintage production – in which Ferris, the sassy Sloane at his side, speeds off in a Rosso Corsa Ferrari 250GT. Regardless, Suzuki's attention had been diverted away from America, towards Europe.

Suzuki's maverick approach to game development would, during the Nineties, become accepted practice – 12 years later, for example, fellow Sega man Yuji Naka would take his *Sonic Adventure* team to South America purely for research purposes – but in the mid-Eighties Suzuki was already doing things the interesting way, literally journeying around the world just to make sure that his game would be the real deal. Suzuki's plans culminated in a European research adventure. "Because of the 'transcontinental' concept," he recalls, "I felt that I should first actually follow such a course myself, collecting information with a video camera, a still camera, and other equipment. I started out from Frankfurt, where I hired a rent-a-car, and I installed a video camera on the car. I drove around Monaco and Monte Carlo, along the mountain roads of Switzerland, stopping in hotels in Milan, Venice and Rome, collecting data for a fortnight. I have many happy memories of that trip. There were many places I visited where communicating in English wasn't sufficient: one time, when ordering a meal, I thought I had asked [in a European language] for a single bowl of soup but was surprised when four bowls of soup were brought to me!"

Soup or no soup, there was still much work to be done during Suzuki's fortnight in Europe. "The next step was to talk with local people in the places I visited, and [later] to make those discussions and other episodes reflected in the game," Suzuki remembers. The result was a unique videogame snapshot of the

IN THE KNOW

» **PUBLISHER:** SEGA
» **DEVELOPER:** AM2
» **RELEASED:** 1986
» **GENRE:** DRIVING
» **EXPECT TO PAY:** £1-£50, DEPENDING ON WHICH VERSION YOU GO FOR

VERSION EXCURSIONS





Sega Mark III/Master System
This was the first console conversion of *OutRun*, appearing in Japan on 30 June 1987 – less than 12 months after the coin-op debuted in Japan. It wasn't a bad effort, either: in terms of presentation it's superior to most 8-bit computer versions, and the game also supported the Mark III's Yamaha YM2413 FM sound unit, which helped ensure the soundtrack didn't sound too far removed from the original tunes heard in the coin-op.



Mega Drive
In August 1990 *OutRun* was released on a Mega Drive cartridge, having been successfully ported to the console by conversion specialist Sanritsu Denki (now an independent developer known as SIMS, this company was at the time wholly owned by Sega). The Mega Drive version of *OutRun* was notable for featuring a new, exclusive song called *Step On Beat*.



PC-Engine
This Japan-only PC-Engine conversion by NEC showed up at the end of 1990. It's an excellent piece of work, easily outstripping the Master System version while giving the Mega Drive release a good run as well – in spite of the supposed superiority of the Mega Drive hardware.



Sega Saturn
The brilliant Saturn version of *OutRun* was released in Japan under the Sega Ages banner in September 1996. Not only does this disc contain both the Japanese domestic and international variations on the arcade code, but it also features a 60fps refresh rate that outperforms the coin-op's 30fps standard. The Saturn build even includes newly arranged versions of the classic four-song soundtrack, which were personally reworked by Hiroshi Kawaguchi in early 1996. This *OutRun* release was handled by Game no Rutsubo, another specialist Japanese conversion outfit.



Dreamcast
While certainly highly respectable versions of the game, *OutRun* in both *Shenmue II*, where it appeared as a mini-game, and *Yu Suzuki Gameworks* as part of a five-game retrospective compendium differs from the original arcade in a couple of areas: specifically, the player's car is a generic Ferrari-style motor but not the original Testarossa design, while the timbre of the music is also slightly changed. In spite of these discrepancies, both Dreamcast appearances were in fact produced by Game no Rutsubo, which had done such a spellbinding job with the Saturn version.



Game Gear
This was the first handheld version of *OutRun*, released in 1991. As expected, the Game Gear version struggles to re-create the look of the coin-op, but it does succeed in achieving a first for *OutRun* outside of the arcade: plug in a Link Cable and two-player racing becomes an option.



Game Boy Advance
This surprisingly fine version of *OutRun* appeared along with dinky takes on *After Burner*, *Space Harrier* and *Super Hang-On* as part of the Atari-published *Sega Arcade Gallery*, which was released in the UK in January 2003. Ironically, in spite of its quality, the Bits Studios-converted GBA *OutRun* never appeared at retail in Japan.



Mobile
OutRun on a mobile phone? Yep, and there are some keitai versions available in Japan that look superior to some of the 8 and even 16-bit console renditions of the game. Shame about the controls, though…



Commodore 64
The loading times on this 1987-vintage C64 version were unbearable, and the gameplay wore livery that was only vaguely similar to the real *OutRun*. There was no choice of routes, and only *Magical Sound Shower* and *Splash Wave* were represented, albeit in an approximated way, on C64 *OutRun*'s soundtrack. On the plus side, there were a few POKEs you could input to either stop the clock from ticking down or to enable you to pass through other vehicles. Thank goodness for the Saturn.



Sinclair ZX Spectrum
The Probe-developed 1988 Speccy version of *OutRun* was, like the Commodore 64 release, published by US Gold. Also like that Commodore 64 title, it was barely a fraction of the game that players knew from the arcades.



Amstrad CPC
OutRun on the CPC, also released in 1988 and programmed by Probe, wasn't much better than the Spectrum version: it had no in-game music, and again it looked like a distant, ugly relative of the coin-op. On the plus side, CPC *OutRun* had the proper route-switching setup, which the Commodore 64 release infamously was without, and it was bundled with a tape of the music from the arcade version, so you could stick that on the stereo while playing and sort of trick yourself into believing you had a virtual arcade in your bedroom.



MSX/MSX2
OutRun on the MSX and MSX2 was released in 1988. It was a simple reduction of the coin-op, looking even more stripped-down – although a lot more colourful – than the C64 version. Although MSX *OutRun* was released immediately after the FMPAC sound source cartridge came out, this Pony Canyon-published release failed to take advantage of the new hardware add-on, resulting in a blippy-sounding mediocrity.



Commodore Amiga
For those who were lucky enough to own an A500 as early as 1989, Probe had an Amiga conversion of *OutRun* that resembled the coin-op much more closely – at least to the point where it was obvious what the source material was – than the CPC and ZX versions it had also coded.



Atari ST
Likewise, the ST version of *OutRun*, which was released in 1988, shortly before the Amiga build appeared, was a continent away from the 8-bit computer ports it outran.



DOS
DOS users weren't left out of the *OutRun* conversion circus, either: Sega published a version programmed by Distinctive Software employees (under the Unlimited Software alias) in 1989. It was a worthy effort, although the Amiga and Atari ST versions had greater shine.

mid-Eighties, a Japanese interpretation of European geography. *OutRun* is in many ways the game that is most representative of bubble-time Japan's extravagances: it's a production with concessions to luxury, driving a Ferrari Testarossa, sitting inside a state-of-the-art coin-op cab, taken at endless high speeds across effusively bright European-styled country, all to an inspirational soundtrack where the only hint of melancholy arrives beyond the final checkpoint, as *Last Wave* fades out.

Even while the bubble lasted, however, there were some limits. Sega's resources were not endless and the technology available to Suzuki at the time – while fearsomely powerful compared with other hardware of a mid-Eighties vintage – didn't stack sufficient memory to facilitate all of Suzuki's dreams. As a consequence of these and other factors, most notably a lack of time, Yu Suzuki found it necessary to make a few compromises during *OutRun*'s development. It turns out that these cuts were not to any great gameplay detriment, yet Suzuki was instinctively unhappy with being forced to sacrifice any of his ideas: "I was only able to put around half of the things I wanted to do into *OutRun*," he says. "Because of budget and development time limitations, some of the contents I'd planned had to be squeezed or cut. I'd made preparations for eight individual characters and I wanted to include various events at each checkpoint, which would have made the player experience a story; something like the *Cannonball Run* film. I also wanted to give players a choice of supercars to drive, so that they could enjoy differences in car performance."

Of course Suzuki's hoped-for garage of driveable Ferraris was eventually realised to near-perfection in 2003's *OutRun 2*, but for the original game he had to be satisfied with just one Ferrari. "Naturally I was yearning for Ferraris," Suzuki says. "Above all, the most talked-about car of the time was the 12-cylinder Ferrari Testarossa. The first time I saw the car was in Monaco, and I was really moved by its beauty – I thought, 'There is no choice: this is the only one'. There are many other charming Ferraris, but memory problems made it impossible to include them in the game… So we decided that the player's car should be the 12-cylinder Testarossa."

» Selecting a track from the car stereo is one of *OutRun*'s simple joys.





THE CAR IN FRONT IS A TESTAROSSA

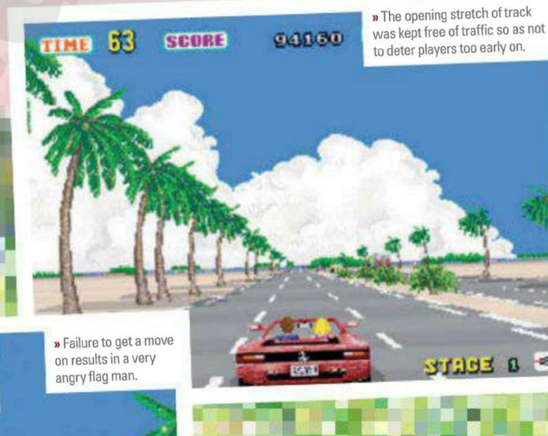
"Five of us squeezed into a car and drove for three hours to see a [privately owned] Testarossa" YU SUZUKI ON HIS TEAM'S DEDICATION TO FERRARI'S HOTTEST CAR OF THE EIGHTIES

On returning to Japan, Yu Suzuki and his team set out to conduct further research. Suzuki had already explored the potential for *OutRun*'s scenery and environment throughout his European rent-a-car expedition; his team's next objective was to learn more about the Testarossa, but this was fraught with problems, as Suzuki relates: "Only a tiny number of Testarossas had been brought into Japan, so we had some trouble finding an owner to help us with collecting car data. Eventually, five of us squeezed into a small car and drove for three hours to see a [privately owned] Testarossa. We took photos of it from every side, at five-degree intervals, and we also recorded the sound of the engine."

Suzuki's work on *OutRun* was a model of thoughtful, conscientious design. Suzuki has previously spoken of keeping a notepad and Dictaphone next to his bed, so that he could quickly note any ideas he had in dreams. It's no coincidence that *OutRun*'s opening stretch of road is traffic free: this was to ensure that players stood no risk of being discouraged by suffering a collision early in the game, so soon after inserting a 100-yen coin to play. Instant explosions on collisions between vehicles, too, in spite of being prevalent in racing games prior to the *OutRun* era, were not to Suzuki's liking, and he deliberately omitted this faddish conceit when designing both *Hang-On* and *OutRun*. On the other hand, Suzuki reckoned that zooming out into the lead and then just staying there for the rest of the race wasn't much fun either, which is partly why *OutRun* is a race against the clock, rather than an inter-vehicle competition.

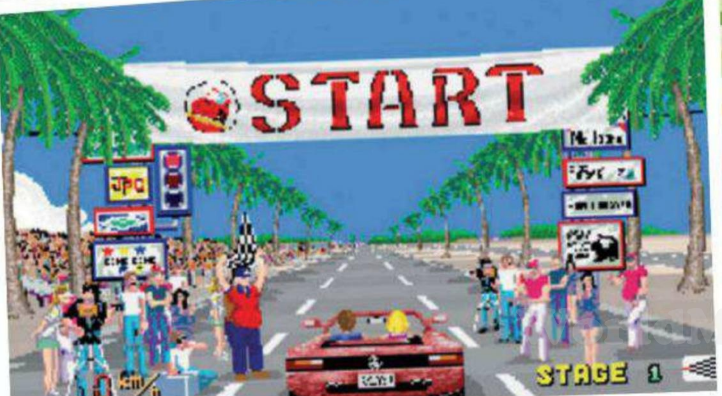
Yu Suzuki's personal gameplay preferences happened to be in tune with those of the majority of players, leading to design decisions that would help *OutRun* to push driving games away from their tendency towards 'the impossible', as Suzuki explains: "At the time of *OutRun*'s development, driving games were made whereby a collision with another car would automatically result in an explosion, and they had many things that would be impossible with real cars. Even if you were good at driving actual cars, the skills needed in those games were completely different. I wanted to make a driving game where people who were skilful drivers of cars could also achieve good results in the game. For that reason, where at all possible, we simulated features such as horsepower, torque, gear ratios and tyre engineering close to those of real cars. For features that were difficult to control, we added AI assistance. For its time, I think the level of *OutRun*'s production was very high."

The AI assistance Suzuki speaks of was used to particularly good effect with the handling of the Testarossa. The 'drift' techniques Japanese racing game developers tend to talk about are, according to Suzuki, essential in good driving games – if the car's tyres grip the road surface too closely, the handling of the car will be too twitchy – but prior to *OutRun* this wasn't commonly appreciated by driving game developers. The response of *OutRun*'s Ferrari was pitched perfectly, however, neatly averting all of the frustrations that players feel when they're attempting to control cars which are prone to understeer, oversteer or 'twitchiness'. And it's just as well, really: not only did *OutRun* present endless one-way traffic through which you had to weave a path, but it also presented a choice of routes at the end of each stage, demanding that you swerve left or right to head towards the next easier/trickier area. In a game as gorgeous as *OutRun*, while the primary thrill was in the ride, part of the fun was just seeing what the next stage looked like. Suzuki



» The opening stretch of track was kept free of traffic so as not to deter players too early on.

» Failure to get a move on results in a very angry flag man.





Turbo OutRun
Turbo OutRun was the first of many pseudo-sequels to Yu Suzuki's original formula, and this one gets even closer to the *Cannonball Run* inspiration by virtue of its setting as a pan-America race. It also introduced a turbo feature for limited quick boosts.



Battle OutRun
An exclusive game for the Sega Master System, *Battle OutRun* stripped away all of the notions of luxurious driving from the original *OutRun* game and replaced them with cheap criminal-chase 'thrills'. Hmm.



OutRun Europa
This entry in what was becoming a series of sort-of *OutRun* games appeared on the Game Gear, SMS and C64 in 1991. It tried to be the Sega-authorised contender to Taito's excellent *Chase HQ*, but failed due to shoddy design and cheap production values.



OutRun 3-D
Another SMS release, *OutRun 3-D* was designed to take advantage of the SegaScope 3D Glasses. It seemed futuristic, although the developer's lack of confidence in the concept was belied by its reassurance-veiled-as-a-boast, "WITH 2-D MODE!"



OutRun 2019
F-Zero meets *OutRun* in this Mega Drive release from 1993. The diverging routes of *OutRun* at least are retained here, however, the Ferrari has been replaced with an awkwardly styled rocket car… from the future.



OutRunners
This is one of the better *OutRun* sequels, the coin-op version featuring linked cabinets for multiplayer racing and the System Multi 32 board powering late sprite-based graphics drawn in a style similar to Yu Suzuki's 1988 classic, *Power Drift*.



OutRun 2 / OutRun 2 SP
This great game had a full Ferrari licence with new game modes and awesome Chihiro-powered 3D graphics. It was the first real sequel to *OutRun*, and it had only taken 17 years to arrive. An online version of SP is available on PSN and XBLA.

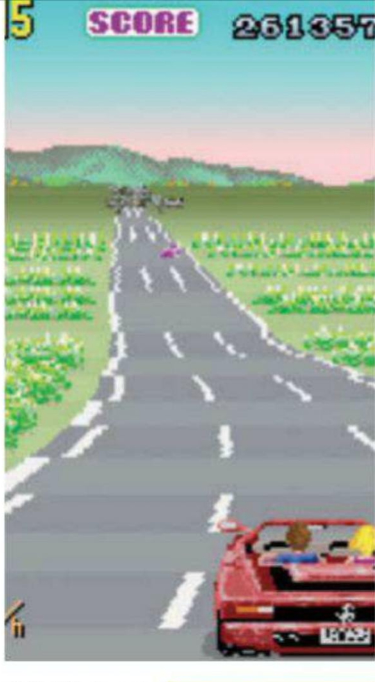


Sega Ages 2500 Vol 13: OutRun
This is in part a sequel to *OutRun* and in part a conversion of the original game, in dull polygonal 3D graphics. A new Arrange mode means you needed to overtake rivals within each stage, and then stay ahead of them until the end of your drive.



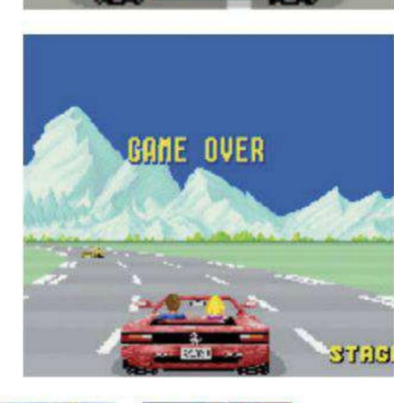
OutRun 2006: Coast 2 Coast
This is the homecoming of *OutRun 2* and *SP*, collecting fine Xbox, PS2, PSP and PC conversions of the arcades together with additional console/computer-exclusive material. Essential.





» Cutting it this close can be incredibly frustrating.





concurs, explaining that the emphasis on the scenery was deliberate: "I wanted to make a game where you could enjoy magnificent changing scenery and landscapes while driving, and really get a nice sensation from playing it – not a stoic racing style of play."

From the use of a roofless Testarossa and the choice of Coconut Beach as the game's first stage, to the names of the soundtrack selections – breeze, wave, shower – and the various pastel shades used to draw the sky, *OutRun* feels almost tangibly fresh; the perfect game for summer. We mention this to Suzuki, quietly hoping we haven't just perceived the experience horribly wrong all these years. "Yes, that's correct," he nods, to our relief. "I wanted to make stages where you could smell the fresh fragrance of new leaves and flowers, like in the green meadows of Switzerland, so I'm happy that you were able to sense that."

For such a cohesive, finely crafted game, it's surprising to hear that the team behind *OutRun* was very much a randomly assembled group of individuals from within Sega. "The team consisted of four programmers, five graphics designers and one sound creator," Suzuki says, "and we had the [coin-op] cabinet made by commissioning another team. The game development team was made up of people who happened to be available at the time, so I wasn't able to assemble the team according to my wishes. I wrote all of the important planning and programming parts myself; I don't think anything was really influenced by the development staff. I recall the bulk of development work taking between eight and ten months to complete. However, during those eight to ten months I was almost living at Sega," he laughs.

Although the other programmers and graphics designers working on *OutRun* appear, according to Suzuki, to have had scant influence on shaping the game, one man – Hiroshi Kawaguchi (the artist formerly known as Hiroshi Miyauchi) – had a tremendous effect on what has become one of the most highly regarded aspects of *OutRun*'s production: its music. Kawaguchi joined Sega as a programmer in 1984, coding alongside Yuji Naka on the SG-1000 game *Girl's Garden* while writing music purely as a hobby outside of work. Suzuki heard some of Kawaguchi's tunes and was so impressed that he commissioned him to produce the soundtrack for *Hang-On*, after which Kawaguchi quit his role as a programmer and became a full-time in-house composer at Sega.

Yu Suzuki, himself a guitarist, had specific requests of Kawaguchi for his *OutRun* assignment: "During the planning stage I explained in detail to the sound engineer what type of tunes were needed. I told him that basically I wanted eight-beat rock rhythms at a tempo of 150bpm. I remember selecting a number of tunes to be used as points of reference. In those days we couldn't use samplers or PCM sound sources, so the timbre of the tunes was a synthesizer creation, which led to us having some difficulty when attempting to trim data quantities for playback of the tunes. I remember wanting some guitars and voices in the soundtrack, but it was impossible to achieve with the technology of the time, so I ultimately had to give up."

The final soundtrack represents one of the finest, enduring examples of Japanese videogame music. *OutRun* offers players a choice of three tunes – *Passing Breeze*, *Magical Sound Shower* and *Splash Wave* – via a mock car-stereo screen before the action begins. It's a concise collection of aurally luxurious numbers, each upbeat and catchy to the point where players would anticipate every subsequent bar. Somehow these tunes fit *OutRun*'s graphics perfectly, and they even seem to be in tune with the feel of the Testarossa's acceleration and handling. This is explained in part by Yu Suzuki's balanced commitment to *OutRun*'s sonic, visual and responsive aspects: "I couldn't think of the game and music as detached, separate things," he tells us – but there's also the fact that Hiroshi Kawaguchi, after working with Suzuki to deliver the excellent *Hang-On* music, was beginning to understand Suzuki's wishes and his way of thinking. We ask Yu Suzuki to reveal his favourite *OutRun* cut and he responds without any hesitation: "*Magical Sound Shower*."

Aware of all five senses – he has even contemplated the potential for games that challenge players' sense of smell – Yu Suzuki wanted to make *OutRun* a tactile experience – not just something to appeal to the eyes and ears. Hence the cabinet designs he commissioned, which were early examples of coin-op setups capable of delivering force feedback to players at appropriate moments, such as whenever the Testarossa crashed into a roadside signpost. There were four flavours of *OutRun* cab: Deluxe and Standard moving types, an upright with a force feedback wheel only, and a cockpit version without any such movement. The appeal of the jolting DX and SD versions was overwhelming, and after their initial trial runs non-feedback cabinets became relatively rare in Japan. Regardless of the presence/absence of moving parts in these prestigious cabinets, all of them used Nanao-brand monitors. It was essential that *OutRun*'s super-quick sprite-scaling and undulating roads were displayed on the best possible screens, and it was fortuitous that these cabinets were the last wave of Sega machines to use Nanao monitors. As part of a cost-cutting exercise, subsequent Sega coin-ops would use lower-spec Samsung displays – while the Nanao screens would stay bright forever, the later Samsung monitors were prone to screen-burn and visual signs of ageing.

The *OutRun* arcade machines had an unexpected effect on the crowds of players who used to hang out at Japan's game centres; no previous driving game had inspired such dedication. And players went to extraordinary lengths in the pursuit of high scores. Around 1988 it was common in Japan to find *OutRun* machines with broken gearsticks: the so-called 'gear ga-cha' trick – where opportune gear-down/gear-up shifts would be rewarded with a prolonged white-exhaust speed boost – was published in Japan's then-widely read *Gamest* magazine, along with a photo-led guide to explain the intricacies of the move. Arguably the most aggressive of OutRunners were not playing in the intended spirit of the game, but such determined play helped to establish *OutRun* as a phenomenon in the arcades, as well as a commercial success that covered Yu Suzuki's travel expenses many times over.

Yu Suzuki has always been blessed with a clear vision of what he wants, even if, as in the case of the unfinished *Shenmue* saga, he hasn't always managed to get it. But with *OutRun*, Suzuki's vision was realised as perfectly as could have been hoped for, leaving players and its designer and programmer with a supreme, satisfying experience borne out of red metal, pastel skies and accelerating away towards the horizon. We'll leave Yu Suzuki with the final word; he deserves it: "*OutRun*'s concept was not about frantically racing to just barely take first place. It's about giving a ride to a beautiful woman, who sits at your side, and driving around in a luxurious car with just one hand on the steering wheel, taking first place in the race by a wide margin – and with time to spare."



Yu Suzuki Timeline



HANG-ON (released 1985; Arcade version pictured)



SPACE HARRIER (1985; GBA version pictured)



AFTER BURNER II (1987; Arcade version pictured)



POWER DRIFT (1988; Arcade version pictured)



VIRTUA RACING (1992; Arcade version pictured)



VIRTUA COP (1994; PS2 version pictured)



VIRTUA FIGHTER 2 (1994; Arcade version pictured)



» The open road, a blonde gal at your side, *Magical Sound Shower* playing. Thanks, Yu.

DEVELOPER HIGHLIGHTS

HANG-ON (PICTURED)
SYSTEM: ARCADE
YEAR: 1985

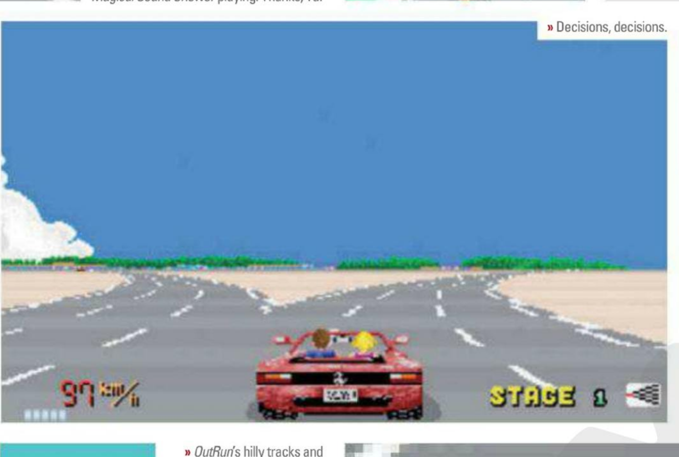
VIRTUA FIGHTER 2
SYSTEMS: ARCADE/ SEGA SATURN
YEAR: 1995

SHENMUE
SYSTEM: DREAMCAST
YEAR: 1999

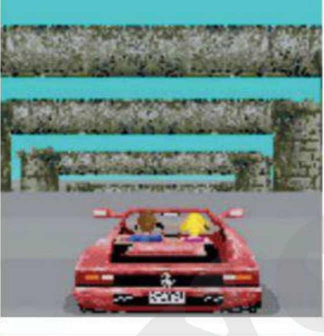


"The main impetus behind OutRun's creation was my love of a film called The Cannonball Run. I thought it would be good to make a game like that"

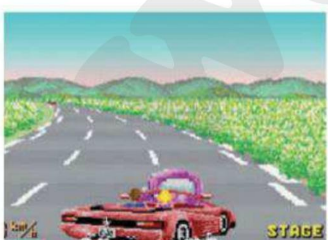
YU SUZUKI ON HIS FASCINATION WITH THE BURT REYNOLDS FLICK



» Decisions, decisions.



» *OutRun*'s hilly tracks and undulating scenery add to the great sense of speed.





FERRARI F355 CHALLENGE (1999; PS2 version pictured)



SHENMUE (1999; Dreamcast version pictured)



SHENMUE II (2001; Dreamcast version pictured)



PROPELLER ARENA (unreleased; Dreamcast version pictured)



VIRTUA FIGHTER 4 (2001; PS2 version pictured)



OUTRUN 2 (2003; Xbox version pictured)



PSY-PHI (2006; Arcade version pictured)



SEGA RACE TV (2008; Arcade version pictured)

CALIFORNIA GAMES

FUN IN THE SUMMER SUN



- **PUBLISHER:** SEGA
- **RELEASED:** 1987
- **GENRE:** SPORTS
- **FEATURED HARDWARE:** MASTER SYSTEM
- **EXPECT TO PAY:** £5



HISTORY

While there are newer versions of *California Games* available, it's the Master System outing that we find ourselves going back to year after year. And even today, over 20 years after the game's original release, short of heading down to your local beach and smothering yourself in factor 35, it remains one of the best summer experiences you can have.

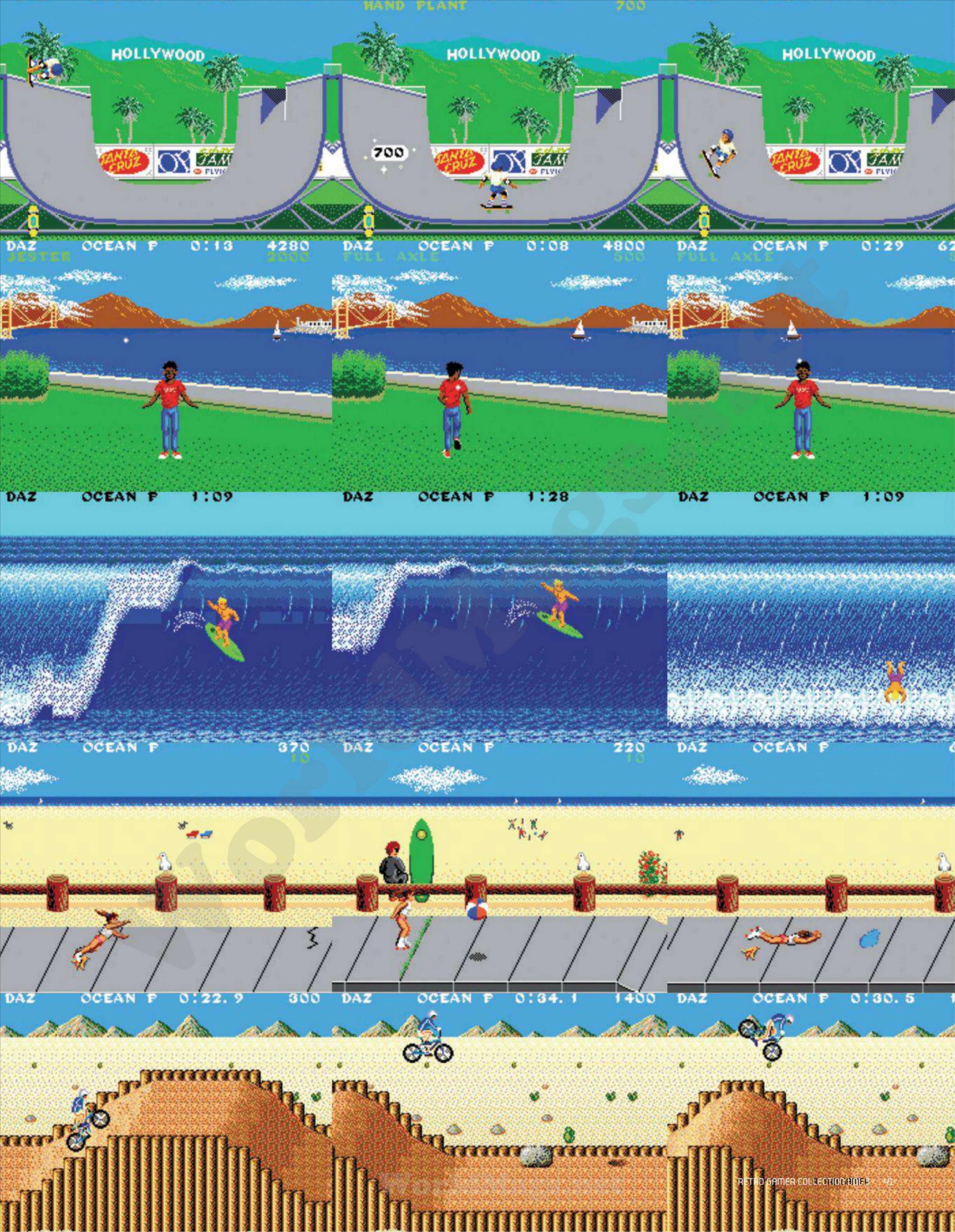
Arguably one of the greatest titles in the extensive *Games* canon, *California Games* not only did a great job of digitally capturing those long, hot summer days, but it also turned out to be a pretty darned good game, which offered a variety of different events to compete in.

Half-pipe had you busting out tricks on a skateboard within a strict time limit; footbag saw you trying to keep your bag in the air for as long as possible; while surfing required you to do nothing more than ride a wave as coolly as possible. Although each of the six events boasted extremely simple play mechanics – no doubt a throwback to *Summer Games*' 8-bit computer heritage – they were nevertheless extremely fun to play.

While the Lynx version is notable for its link-up abilities, and the Mega Drive outing boasted superior visuals, there's something about playing *California Games* on the Master System that epitomises everything about Epyx's brilliant game.

Visuals are wonderfully vibrant; presentation, while simplistic, offered a variety of different options and allowed you to do everything from choosing specific events to compete in to the naming of your sponsor; while little elements – like being able to hit a passing seagull with your footbag – kept a big smile plastered all over your face.

So the next time it's pelting down with rain and you're feeling all depressed, load up *California Games* and take a sun-drenched stroll down Memory Lane. Just make sure you stay away from the diabolical sequel.


HAND PLANT
700
HOLLYWOOD
SANTA CRUZ
DAZ OCEAN F 0:13 4280
JESTER 2000
DAZ OCEAN F 0:08 4800
FULL AXLE 500
DAZ OCEAN F 0:29
FULL AXLE
DAZ OCEAN F 1:09
DAZ OCEAN F 1:28
DAZ OCEAN F 1:09
DAZ OCEAN F 370
DAZ OCEAN F 220
DAZ OCEAN F
DAZ OCEAN F 0:22.9 300
DAZ OCEAN F 0:34.1 1400
DAZ OCEAN F 0:30.5

BULLFROG



GLENN CORPES AT THE EUROPEAN COMPUTER TRADE SHOW IN 2001, PRACTISING HIS JUGGLING SKILLS.

BEGINNINGS OF LIONHEAD. LEFT TO RIGHT: JONTY BARNES, TIM RANCE, DEMIS HASSABIS... ...PETER MOLYNEUX, STEVE JACKSON, MARK HEALEY, MARK WEBLEY.

DELVE INSIDE ONE OF GAMING'S MOST FERTILE MINDS

A CONCEPT ART IMAGE OF THE CANCELLED DUNGEON KEEPER 3.

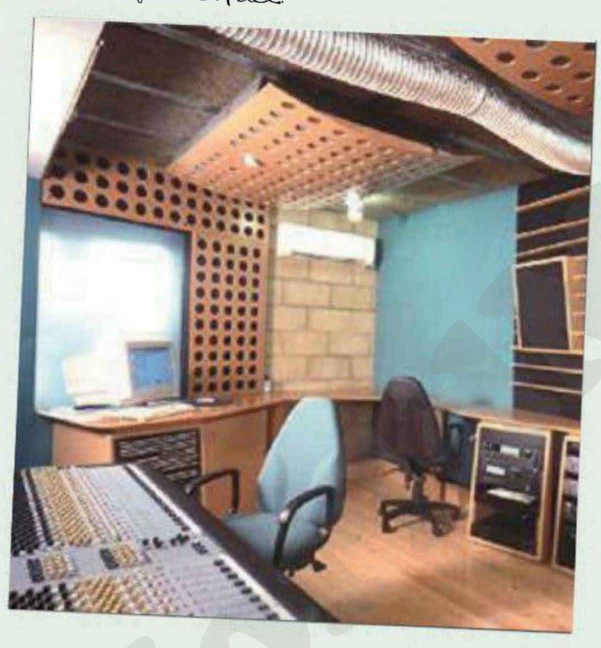




KINGS OF THE GOD GAME

Populous, Syndicate, Magic Carpet and Theme Park: all from Bullfrog and recognised around the globe. Former employees inform Kim Wild how a mistake by Commodore resulted in the creation of classic software for a multitude of formats

The sound studios of Bullfrog, where all the audio magic took place.



To look at a full history of Bullfrog, we need to go back to 1982 when Les Edgar first met Peter Molyneux. Les had just opened a computer retail outlet in Guildford, focusing on the sales of Tandy machines (later BBC, Apple and Olivetti), when Peter arrived looking for a computer that would use the database software he had been writing for his employers. It was a meeting that formed a long-standing friendship. "I guess we just hit it off from that point on – we were almost the same age and shared a lot of interests, one of which was to succeed in business," recalls Les. "We had very much the same sense of humour and the unfaltering belief that one day we would be successful." However, the retail side of the industry lacked challenge or excitement for Les, a qualified electronics engineer, so the two joined forces, opening their own software company, Taurus, responsible for creating bespoke databases for commercial clients. After some time, Commodore contacted the firm, mistaking it for another company named Torus, and sent it several prototype Amiga machines. Within the world of databases, Les and Peter developed a relational programmable database called Acquisition. It would prove to be a colossal mistake. "It makes me shudder to think about it now – even the name was a disaster," says Les. "The Americans didn't associate the word 'acquisition' with data collection and thought we were selling some sort of company mergers software. Nevertheless, we managed to sign a distribution deal with a US company and sold them the first 1,000 units. Life was good, the bank was happy, we were drunk – at least until the first 200-page fax containing bugs and problems arrived on our desk. Turns out that in real life, as against our simplistic testing, real people tried to use the software with real data in commercial situations and it didn't work. So, after spending all of our money fixing bugs and issuing a 50-page amendment to the manual, we had to question our future as commercial software developers."

With the Amiga becoming increasingly used for game development, it occurred to Les that they could write games themselves. There was just one snag: they didn't know how. The opportunity arose from a friend who had just finished *Druid II* for the Atari ST and needed someone to convert the game to the Amiga. "We lied about our abilities and got the project," says Les. "Although we didn't make any money from this, we learnt how to move sprites on the screen and developed our own basic routines for animation. Turns out that games are just a big database – that was handy. While this was going on, Peter was desperately fixing the Acquisition bugs while we were sorting out *Druid II*. In 1985 I founded Bullfrog in preparation for the time when Acquisition was out of our hair and we could concentrate on games."

Around that time, Glenn Corpes was employed as an artist, although his role changed throughout his time at Bullfrog. "I was interviewed for a programming job and spoke to Peter for a few hours only to be told they had all the programmers they needed. Luckily, I could draw a bit so I managed to get a job as an artist," recalls Glenn. His first job involved porting *Druid II*. "I basically copied the graphics and maps from the C64 version and its editor. I also did a little design work on the collision system as, even though I'd been hired as an artist, I was the only

IN BRIEF

Bullfrog was formed in 1985 by Peter Molyneux and Les Edgar. Immediately springing to prominence thanks to highly inventive games like *Syndicate*, *Populous*, *Theme Park* and *Dungeon Master*, it was purchased by publisher Electronic Arts in 1995. Molyneux eventually left and founded Lionhead Studios in 1997. Sadly, Bullfrog was disbanded in 2004 when EA combined it with its other UK studios to form EA UK.



» Les Edgar, pictured here with his new interest, cars, is still building things today.

THE LEGACY LIVES ON

It seems that despite the passing of time and the amalgamation of the company into EA, Bullfrog's presence within the game industry can still be felt. A quick look at your local videogame emporium or supermarket, for that matter, will reveal copies of *Dungeon Keeper 2*, *Theme Hospital* and *Theme Park* in the budget section, still commanding healthy sales to a new generation of gamers. The ever-increasing emphasis on retro gaming has also played its hand, with the EA Replay PSP compilation featuring *Syndicate* among other non-Bullfrog titles, and the Nintendo DS has recently seen a *Theme Park* remake adapted to the touch screen. *Theme Park DS* had a mixed reception due to being a straight port of the PC original, but if you are still a fan, it's a very good conversion for when you're on the move.

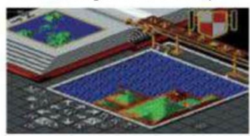


BULLFROG



CONVERSION CAPERS

Populous's popularity meant that conversions to other formats were inevitable. Les Edgar licensed out the rights to the PC, Mac, Sega and Nintendo, which led to *Populous* (and future Bullfrog titles) becoming an established franchise, with Japan proving surprisingly lucrative. Regarding the *Populous* conversion, Glenn Corpes comments: "These were handled by third-party developers and some worked better than others. The Mega Drive version was a simple port from the Amiga with a joypad-controlled mouse – very hard to play – while the SNES version by Imagineer in Japan was wonderful, with lots of shortcuts on different button combos. The Game Boy version was a particular favourite. Based on a screen I knocked up on my Amiga of what *Populous* might look like, the wrong person walked past and it went into development. Unfortunately, it slowed to unplayable speeds as soon as more than ten people were walking around the map."



person with experience of that stuff in the company." Bullfrog also created *Fusion*, a futuristic shoot-'em-up game with some puzzles thrown in, which was ported by Glenn to the Atari ST. Its average quality, however, was soon forgotten with the advent of Bullfrog's next project: *Populous*.

Populous (originally called '*Creation*') was the game that put Bullfrog on the map, inventing a new genre, the 'god game'. Designed by Peter and Glenn in seven months, the title saw you playing a god, competing against another for territorial rights. At the time, *Populous* was original, being one of the first games to use an aerial perspective and having godlike powers to influence the followers. It was also one of the few titles to take advantage of a modem for network play. To begin with, very little interest was shown in the game by publishers, but it was Electronic Arts that took the gamble on a new concept. It proved to be a sound investment: the game sold over 4 million copies. "We knew it was an original concept but everyone who saw it 'got' it straight away. Obviously, we never knew how much of a hit it would be and in how many countries, but we knew it was pretty special," recalls Glenn.

"Once we achieved success with *Populous* life was truly great," says Les. "We were able to move from our old, dingy third-floor office into a shiny building on the Surrey Research Park. They had nice carpet and people that cleaned the windows without being asked. They hated us, though. Skateboarding down corridors, vomiting in the urinals, swimming in the ornamental pond, late night comings and goings. By this time we were about 20 people. This, to those that don't know yet or those that have already been there, is the perfect size. You know everybody, what they like on their pizza, what they drink, the names of their girlfriends and personal information that you can blackmail them with when it's their round."

Electronic Arts wanted a follow-up, so *Power Monger* was released to bridge a gap before the impending sequel. *Power Monger* was a success – around a million copies were sold – but it lacked the immediacy of *Populous*. Glenn never really took to the game: "It always seemed like *Populous* with less to do. The funny thing is that I've met loads of huge fans since, who regard it as an important proto-RTS."

At the same time, *Flood*, developed by Sean Cooper with input from Peter, an underrated platformer starring Quiffy trying to save his world from being submerged under water, was released.

Populous II was released in 1991, with more spells, enhanced AI and placing it in the world of Olympian gods. Although refined, the concept never changed, meaning that *Populous II* remained a good game, rather than a classic. Personal preference or not, *Populous II* would sell over a million copies. It seemed that whatever the company touched, it transformed into a magic formula for success. This run of prosperity continued with the next project: *Syndicate*, Sean Cooper's creation.

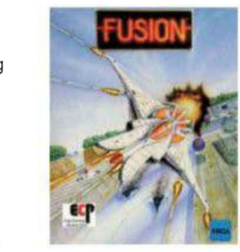
"My main contribution to *Syndicate* was achieving some pretty good contracts with publishers," says Les. "It was around this time that I renegotiated the terms of the original EA contract. We were in a strong position by now and we were able to improve our royalty rates and advances. I did spend a lot of time playing *Syndicate*, which still ranks as one of my favourites."

Its sequel, *Syndicate Wars*, improved on the original, although, understandably, it didn't have the same appeal to those who worked on its predecessor. "The game was pretty good, but it looked messy; the original had been hi-res even on old VGA cards in 386 machines. I also had more involvement with the original, having designed the graphics engine and several of the levels, so I'm not the most impartial person to ask," remarks Glenn.

Andy Robson joined the company full time after stints on *Syndicate* (3DO) and *Theme Park*. "My main role at Bullfrog was to oversee internal testing of all the games in development," he says. "It was also to help with feedback on the game mechanics, which was the best part. They would give us 50 levels to test and provide feedback for. We would rip the levels apart and give them pages and pages of constructive feedback. It was a pretty hectic place to be at times but I loved every minute of it." Testing console games is different to that of the computer iterations. "Obviously you didn't have as much memory, so everything always had to be squeezed down to fit," Andy explains. "Control methods had to be changed to compensate the console user. The one good thing about consoles was that you didn't have all the compatibility issues PCs had."

Magic Carpet was a technically impressive title that unfortunately was a commercial failure. Glenn explains a little of its conception: "I had been playing with the underlying 3D and texturing code for a couple of years, pausing only to design a few levels for *Syndicate* for light relief. The version that was released was finished in about nine months after ditching all but my graphics engine and landscape generation code." The sequel proved to be a source of contention for Bullfrog, and it eventually shipped with some nasty

THE GAMES OF BULLFROG

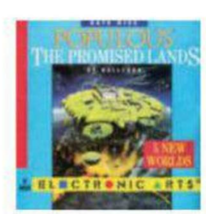


DRUID II
» The first game Bullfrog worked on, *Druid II* had gameplay similar in style to *Gauntlet*. As an exercise in learning how to program, *Druid II* served its purpose rather nicely.

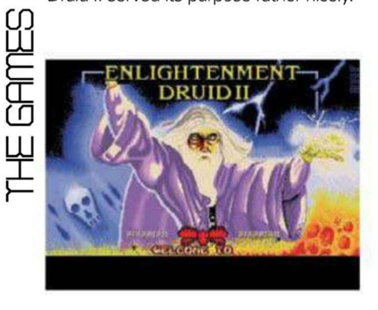


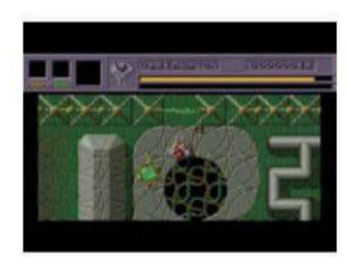
FUSION
» *Fusion* didn't really enhance Bullfrog's reputation, but it did help to pave the way for its future success.

POPULOUS
» As the game that made Bullfrog's name, *Populous* saw the creation of the 'god genre' and is still regarded as a classic, selling over 3 million copies since its release.

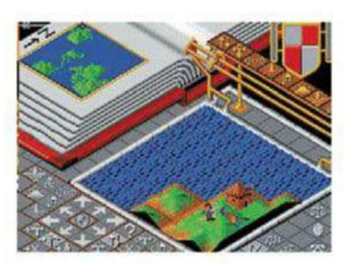


POPULOUS: THE PROMISED LANDS
» Five more worlds to add to the *Populous* canon, *Promised Lands* includes Wild West, Silly Land and Bit Plains, plus a map editor.

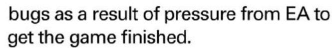












bugs as a result of pressure from EA to get the game finished.

Theme Park was the brainchild of Peter and Demi Habassis and was also the first game for Mark Healey. Having made something of an impact on his first day – "I remember smacking into one of the lead coder's cars while trying to park. I was really worried, but the guy [Mike Diskette] was really cool about it." – Mark became the artist for the console versions. "For the SNES and Mega Drive, memory was much more limited than the PC version, but my C64 background made me an expert in using character-based graphics, so I managed to squeeze most things in. I really enjoyed doing those."

Despite a string of hits, Bullfrog was becoming uncertain about its future. Les explains: "We started talking to EA around 1993 about a possible merger. I decided we should also talk to other major publishers – Sony, Virgin, BMG and so on – to make sure we got the best deal. EA were an easy choice as we had a good relationship with them already, knew most of the people and they offered us the best deal – not just in monetary terms, but great packages for the staff and a large degree of autonomy. In early 1995 we signed the merger document and moved into a new era of corporate confusion."

The first game to be released under the EA banner was *Hi-Octane* and was impressive given its short development time. "We were sitting at one of the quarterly management meetings when it transpired that one of EA's studios would not be able to release their game on time. In corporate land, this means lots of screaming, wailing and gnashing of teeth, so we – somewhat foolishly – stepped into the breach and said we could deliver a game in six weeks from concept to finish," remembers Les. Subsequent releases included the predominately overlooked *Gene Wars* and the quirky *Theme Hospital,* a creation that saw gamers having to manage a hospital burdened with comedic illnesses.

Dungeon Keeper went on to have the most troublesome development time, lasting three years due to a shock departure. "It was quite mad. About halfway through the project, Peter announced he was leaving Bullfrog but was obliged to finish the game. He was banned from coming into the office, so me, Simon and Dean Carter went and worked in Peter's house – I have fond memories of that time," recalls Mark. Andy had a memorable time with Peter, commenting: "He was good fun. We always played tricks on each other, things like me killing his Tamagotchi in a cup of tea. It took me days to get it as he always had the thing round his neck on a string, but unfortunately for him, he left it unattended and you know the rest. He was a good motivator and could turn things around when a game looked like it wasn't going anywhere." The long wait was worth it, the press loved it despite the huge delay, and it sold over a million copies. Many gamers remember the title for the horned reaper character and its tongue-in-cheek sense of humour.

"One thing I can say is that running a dungeon was scarily similar to the way Bullfrog worked," comments Mark. "Once I was involved, thinking of stuff around that theme was easy. The main horned reaper character – or 'Horny' as I liked to call him – was my design. He is based on an ex-girlfriend of mine; she had a very similar grin. And a similar temperament."

Dungeon Keeper 2 was the first game to be developed after Peter's departure, and its commercial success matched the scolding reviews it received.

Although subsequent *Populous* and *Theme Park* games were released, many of the original team felt ill at ease with EA. "By the time EA bought Bullfrog, the company had grown too big for my liking. It tends to make people feel like small cogs, and you get lots of people who are good at talking, but really quite talentless. Strange managers started appearing and suddenly what the shareholders think is more important than anything else. I hated it," says Mark. Andy has the same view: "It just became very corporate. Having to attend more meetings, write more reports and the old 'bullfroggers' didn't really want to work on EA titles. It became a job in the end and not the cool, innovative Bullfrog it was in the early days." Peter's departure also had a big effect on those left behind. "I felt the heart of the place was missing – Bullfrog was no longer a creative haven for me. It felt more like a chicken factory," says Mark.

Concept work by different developers began on *Dungeon Keeper 3* in 1999, but EA was more concerned with the movie licences so the project was shelved. In 2001, the remains of Bullfrog were absorbed into EA and ceased to exist, ending a legacy spanning 15 years.

These days, Mark is working at *LittleBigPlanet* developer Media Molecule; Glenn has set up Weirdwood, a company distributing electronic titles; and Andy has his own testing outsource company, Testology. Les is no longer in the industry, having worked on racing cars – "I was instrumental in getting Aston Martin back into racing" – and is doing what he loves most: building things. "*Populous* got me into being a megalomaniac and I haven't stopped since."

WHERE ARE THEY NOW?

After a managerial role at Electronic Arts, Peter Molyneux longed to get back to making games so handed in his resignation in 1996. In 1997, he founded Lionhead Studios (named after Mark Webley's dead pet hamster), which would develop its first title: *Black & White*. The game was in development for over four years, but its release in 2001 accumulated rave reviews and numerous awards. *Fable* followed in 2004 on the Xbox, notching up 2 million sales, although at the time it was criticised for not including all the features promised during development. Expansion pack *Fable: The Lost Chapters* was released on the Xbox and PC in 2005. *Black & White 2* and *The Movies* were released, but didn't sell as well as projected, so in 2006, the studio was bought by Microsoft, and *Fable II* became its first game as a first-party studio on its Xbox 360 release in 2008.

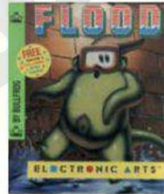




» Surrey Research Park, Bullfrog's home ground. Interestingly, Lionhead is now based within the same centre.

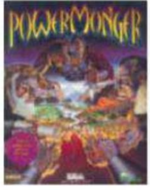
POPULOUS: THE FINAL FRONTIER

» Another add-on disc, offering 500 levels based on another planet. It was released just for the Amiga magazine *The One* and featured on its cover disc.



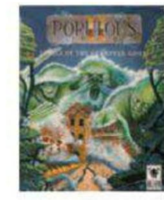
FLOOD

» *Flood* demonstrated that other genres were possible. It was an enjoyable platform game featuring a bizarre creature named Quiffy trying not to get flooded. A plot twist annoyed many gamers.



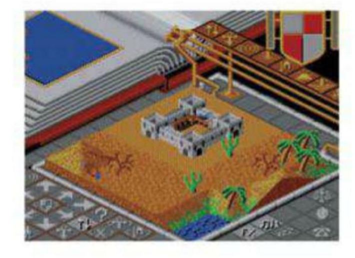
POWER MONGER

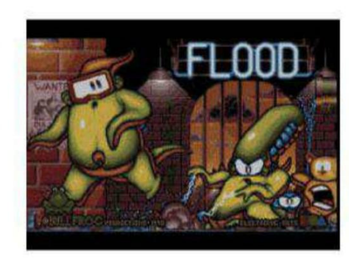
» Aimed at being a real-time strategy war game, a rushed development meant that *Power Monger* never became the classic game it could have been. Nevertheless, it still has quite a substantial fan following.



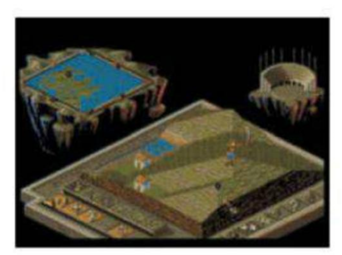
POPULOUS II: TRIALS OF THE OLYMPIAN GODS

» Set among the world of Olympian Gods, *Populous II* refined the original's concept and included additional brand new spells. Doesn't quite have the same appeal as *Populous*, though.









BULLFROG

THE GAMES OF BULLFROG CONT.

POWER MONGER: WORLD WAR ONE DATA DISC

» This *Power Monger* data disc essentially took the original *Power Monger* game and set it against the backdrop of the First World War, while also adding a number of extra campaigns.

PSYCHO SANTA



» This quirky little gem appeared solely on *The One* Amiga cover disc, featuring you in the role of a very unbalanced Santa in a shoot-'em-up come platform escapade.

SYNDICATE



» Hailed as one of Bullfrog's best endeavours, *Syndicate* was dark and violent in a cyberpunk world. With guns, drugs and technology, *Syndicate* took the world by storm and never looked back.

SYNDICATE: AMERICAN REVOLT



» A *Syndicate* expansion pack, the 25 new missions included are incredibly tough, offering those who finished the original even more of a challenge to get into. You have been warned.









POPULOUS II: THE CHALLENGE GAME

» Modes: Create Your Own Deity, Challenge and Conquest. You can carry out tasks like saving a certain amount of the population within an enforced time limit.

MAGIC CARPET

» *Magic Carpet* saw an apprentice wizard riding a carpet to destroy the enemies. Competition from *Doom* prevented the game from being a success, however.

THEME PARK

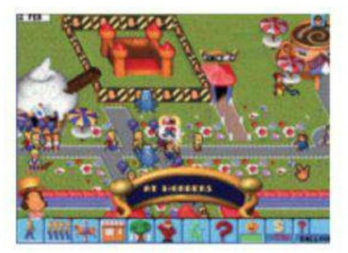
» *Theme Park* was an excellent management game that still holds up today. It may have been surpassed by the likes of *Rollercoaster Tycoon*, but its appeal remains strong for many gamers.

TUBE

» A tech demo by Glenn Corpes, this was released onto a magazine cover disc but never made it to a full product. It can be downloaded from Home of the Underdogs.









HI-OCTANE

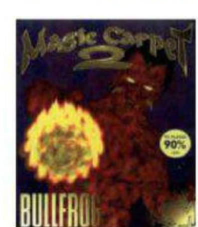
» An unusual diversion from the usual simulation diet, *Hi-Octane* was a futuristic racer that added little to the genre and has aged badly. Not bad for six weeks work, though.

MAGIC CARPET: HIDDEN WORLDS



» A *Magic Carpet* expansion pack offering a winter-themed tile set and 25 new levels offering more of the same.

MAGIC CARPET 2



» The much-maligned sequel, *Magic Carpet 2*, included varied levels and an improved storyline, but failed to attain the appeal of the original.

SYNDICATE WARS

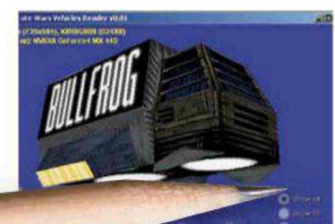


» *Syndicate Wars* added an even deeper storyline. It is noticeably excellent, although many still prefer the groundbreaking original.









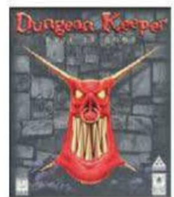




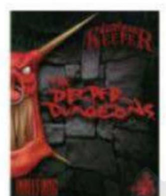
GENE WARS
» An overlooked fantasy-strategy game that featured you assembling races of different species. Its confusing interface made it hard to get into and it has been widely ignored since.



THEME HOSPITAL
» With fictional diseases like Slack Tongue, it's impossible not to love the manic nature of the excellent *Theme Hospital*. Unmissable.



DUNGEON KEEPER
» Renowned for its wicked (literally) sense of humour and the horned reaper, *Dungeon Keeper* saw you managing a dungeon with torture devices, hellish minions and imps.



DUNGEON KEEPER: THE DEEPER DUNGEONS
» An add-on with 30 more levels and improved AI. In 1998, *Dungeon Keeper Gold* combined this with the original, adding a theme pack and level editor.









POPULOUS 3: THE BEGINNING
» Developed by a new team – Glenn Corpes was responsible for designing the landscape texture generator – gameplay elements were added, including chopping trees to build huts.

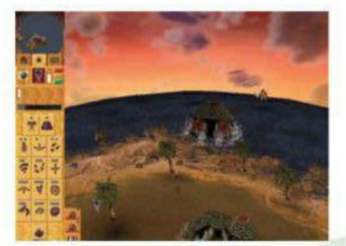
DUNGEON KEEPER 2
» The second game in the series used a brand new engine and managed to improve on the concept of the original, despite not being developed by the original development team.

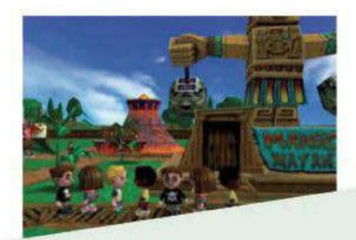
POPULOUS 3: UNDISCOVERED WORLDS
» Yet another one of those data discs that Bullfrog is so fond of, it was released in the UK with a further 12 levels to conquer, both in single and multiplayer modes.

THEME PARK WORLD
» A 3D update of the first game, *Theme Park World* was a reasonable title aimed at the console market. Sadly, it failed to live up to the original version.









THEME PARK INC.
» Aimed at the younger market, *Theme Park Inc.* followed the template of the original but had little involvement with the old Bullfrog crowd. Competent, but dull.

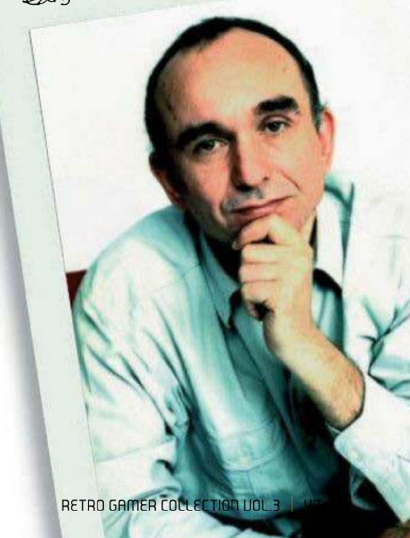
THEME AQUARIUM/ AQUARIUM
» Credited as being developed by Bullfrog, but it originated in Japan. Released here on the PC as *Aquarium*, it's a hideous water park title better left alone.

QUAKE III: REVOLUTION
» The last game tagged with the Bullfrog name despite the distinct lack of 'Bullfroggers', *Quake III* was a port of the PC game to the PS2 to critical acclaim.








Peter Molyneux was instrumental to the success of Bullfrog in its early days. He is now at Lionhead.

THANKS TO Cathy Campos for several interviews

遠くの稀で、エキゾチックなゲームを愛する人々のため

FULL OF EASTERN

ADK'S EXCELLENT 'CUTE-'EM-UP' IS REALLY WORTH TRYING TO GET YOUR HANDS ON

TWINKLE STAR SPRITES

It may plaster your screen with more pastel shades than the entire Dulux catalogue and feature a cast of ridiculous *Sailor Moon* rejects, but *Twinkle Star Sprites* is one intense and compulsive 2D shooter. Mike Bevan reveals the subtle intricacies of a game that lets you rain down hundreds of deadly cartoon fireballs on your rival's head while grinning like a raving lunatic

IN THE KNOW



- **PUBLISHER:** SNK
- **DEVELOPER:** ADK
- **FEATURED HARDWARE:** NEO GEO
- **ALSO AVAILABLE FOR:** SEGA SATURN, SEGA DREAMCAST, SONY PS2 (UPDATED VERSION)
- **EXPECT TO PAY:** NEO GEO (CD) – £69 NEO GEO MVS/AES – £500+ OTHER VERSIONS – £40+
- **CAN'T IMPORT? THEN WHY NOT TRY:** PUCHI CARAT (PLAYSTATION, ALSO ON PS2 – TAITO LEGENDS 2 COLLECTION)

We have to admit that we're a bit stumped recommending a title that compares to *Twinkle Star Sprites*. It really is a one-off. However, for a taster of a similarly competitive two-player experience you could do a lot worse than look to any number of versus puzzle-game titles, such as the *Bust-A-Move* (*Puzzle Bobble*) series, or Capcom's *Super Puzzle Fighter* games. Another good bet might be Taito's *Puchi Carat*, a 'cute' split-screen competitive *Breakout* clone, which might well be the closest title, gameplay wise, to actually get a release in the UK.





Fact Of The Month
Twinkle Star Sprites: La Petite Princess A sequel to the original Neo Geo game, *Twinkle Star Sprites: La Petite Princess* was released in 2005 on the PlayStation 2. Sporting updated polygon-modelled graphics, there's little else in terms of new features, but it plays much like the original, and two-player bouts are as enjoyable as they ever were.



メガ駆動機構

There are two distinct schools of the shoot-'em-up design ethic. So-called 'serious' shooters like *R-Type* and *Gradius*, for example, feature dark, moody environs, often inspired by the visual style of Western sci-fi artists like HR Giger and emphasise technology over character-driven storylines. The 'ships' you pilot in such games are extremely capable pieces of hardware, such as the *Gradius* series' Vic Viper or the *Darius* series' Silver Hawk. Their beautiful sleek lines belie their judicious ability to spew forth laser death. You really wouldn't want to mess with any of them.



» "Tonight, Matthew, I'm going to be… a magical flying cat."



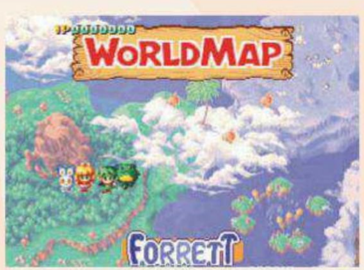
» The Neo Geo home AES version is worth a pretty penny nowadays.

Then there's the 'cute-'em-up', typified by titles like *TwinBee* and *Parodius*. These often feature surreal and colourful, quasi-garish backgrounds and bizarre (to Western eyes) character-heavy plot lines. They also tend to populate their worlds with a host of wacky denizens often designed in the cartoon-like anime-style, more in tune with Japanese sensibilities. Here you're much more likely to be 'piloting' a flying penguin, bunny rabbit or cute girl on a broomstick than an R-9 space fighter. And, for your average non-Japanese gamer, this



GAMES FROM THE EAST THAT NEVER MADE IT TO UK SOIL

N PROMISE



» The World Map is certainly very pretty.


» Kim's smart bomb in action (right-hand screen).

could be considered a bit weird, or so the marketing people seem to think. As such, many of these titles never make it out of their country of origin, or at least past the Asian Pacific Rim. And a crying shame it is, too.

SNK's *Twinkle Star Sprites* falls firmly into the latter of the two camps, but don't let that fool you. At its heart is an incredibly deep, intense and uniquely gratifying gaming experience, which anyone who's ever gained the slightest enjoyment from de-pixellating a space invader should really try at least once, if only for one small reason. It's quite possibly one of the finest and most compelling competitive two-player games ever created. Its core concept could be described as that of a 'versus shoot-'em-up'. If that term brings to mind something like Sega's *Virtual On*, think again. *Twinkle Star Sprites* is a hybrid of traditional shoot-'em-ups, competitive puzzle games and arcade fighting titles, but stands



» The Saturn port can be picked up for considerably cheaper than the Neo Geo original.



» A sticky situation for player one.

on its own terms as something so original it almost requires its own sub-genre.

The game's action revolves around a split-screen format with you and your competitor playing in separate scrolling windows. It's basically two little vertical shoot-'em-ups side by side, and at first you'll be more concerned with shooting or dodging the enemies in your immediate vicinity rather than what the player on the opposite side of the screen is up to, but here's the clever bit. Every time you destroy an enemy it explodes in a large circular detonation resembling a bursting balloon, and if these explosions come into contact with any other baddies they too go boom, leading to a rather satisfying chain reaction of pyrotechnics if timed correctly. Create a 'chain' of four or more enemy explosions and a fireball attack goes flying from your own play field into your opponent's half of the screen. Create multiple chains of six, eight, ten or more such blasts, and even more of these flaming meteors will descend on the poor hapless schmuck connected to port two.

But wait, what's player two doing? Shooting your attacking fireballs and turning them round to come careering back to your side of the screen in a 'reflect attack', that's what. The cheeky blighter. Hang on, though. If you can just blast the returning projectiles yourself and reflect them back again you'll be laughing. Oops, looks like one just landed on your character's head. Right, they're really going to get it this time. And therein lies the beauty of *Twinkle Star Sprites* in a competitive two-player mode. It's like ping pong with bullets. Two well-matched opponents can quickly create utter on-screen chaos and incredible competitive intensity when they get to grips with the game's subtleties, strategies and play techniques.

For instance, is it more advantageous to go for all-out attack and run the risk of your opponent reflecting your projectiles, now stronger, back to your side of the screen, or should you prime your 'charge' weapon, wait for them to attack first, then let them have it? Should you use one of your limited smart



» Player two eats bunny rabbit.

bombs to avoid a tricky attack pattern or try to counter it in the hope of catching your opponent off guard in the resulting deluge of return fire? And when is it best to charge your special 'boss attack', which leaves you defenceless for a few heart-stopping, precious seconds? This is the sumptuous cherry upon the icing of *Twinkle Star Sprites*' elaborately constructed cake. Each of the game's characters has their own personal 'boss', which they can call up and send into battle against their rival, either in the manner just mentioned or by countering a required number of enemy attacks. It's an absolutely genius idea, and there's little in gaming to compare with summoning an enormous flying pig or rabbit onto your opponents screen, which then proceeds to smash them out of existence. No, really, trust us on this.

It has to be said that *Twinkle Star Sprites* isn't nearly as much fun in one-player mode against the rather predictable CPU-controlled AI. Although it does score points in our eyes by having one of its rival characters ridicule you to an extent dependent on the number of credits you've used to reach him. As a two-player game, however, it's almost perfect, with wonderfully balanced competitive gameplay, and almost limitless replayability. And that's got to be worth the price of an import, hasn't it?

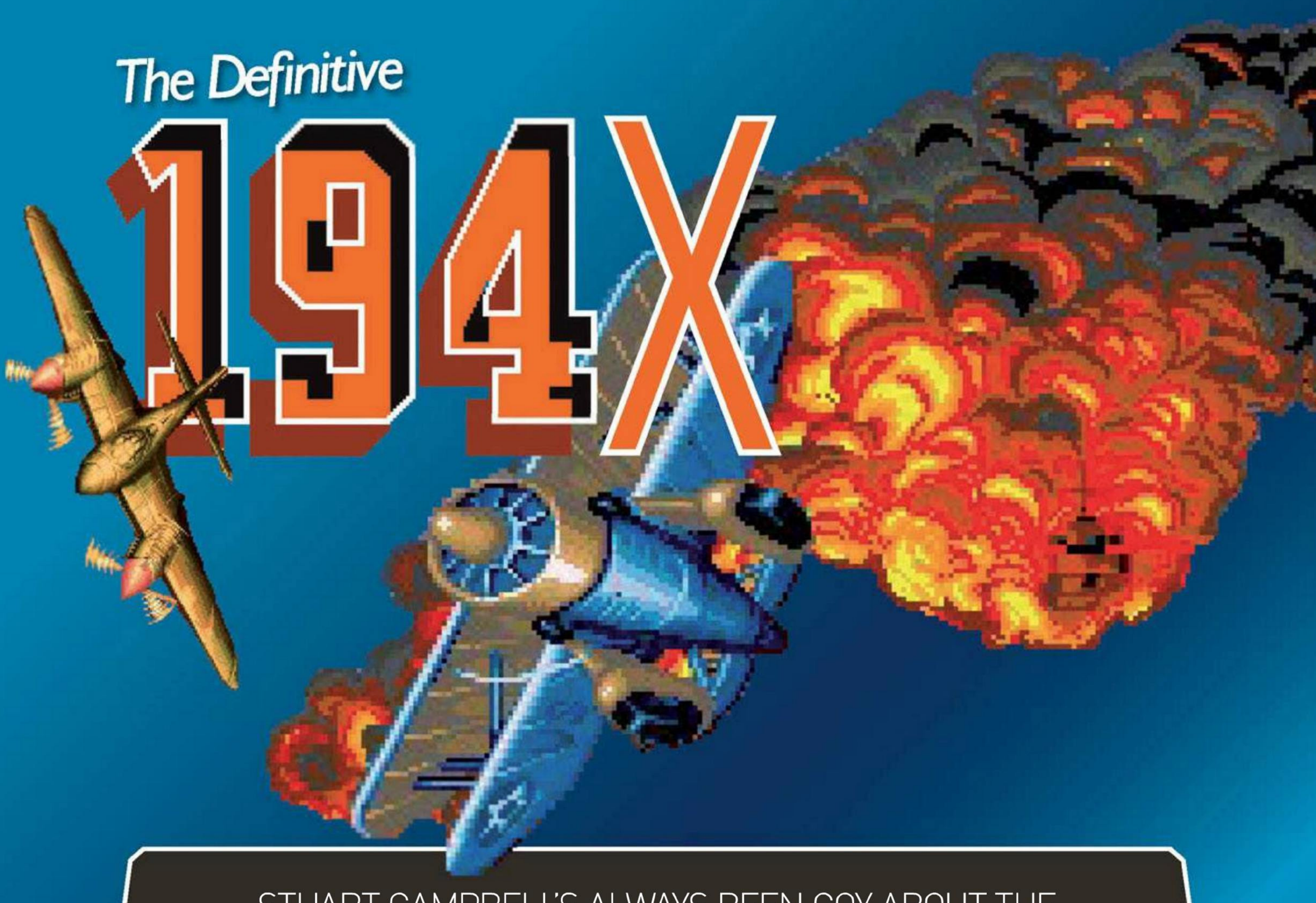


» Yes… it really is an enormous flying pig.

私を読み、私に書くことができ、私に知らせれば好みのゲームはある

The Definitive

194X



STUART CAMPBELL'S ALWAYS BEEN COY ABOUT THE EXACT YEAR HE WAS BORN, SO WE SENT HIM TO INVESTIGATE CAPCOM'S CLASSIC SHOOTER SERIES IN THE HOPE HE'D LET SOMETHING SLIP

If you've played a *Burnout* game any time in the last five years, you'll know that we live in an age of instant gratification. Modern games shower the player with praise and rewards for switching the console on and pressing Start, and the idea of even slightly delaying a player's progress through the narrative – far less stopping it altogether with some forbidding level or savage boss – is becoming rarer and rarer. Therefore, The Definitive thought it'd be nice to salute a series of games that offer the player nothing but antagonism, intimidation and pain… much like the first *Burnout* did before it lost its nerve and started catering to cack-handed nine-year-olds as its primary audience.

Capcom's *194X* line of WWII vertically-scrolling shoot-'em-ups started with one of the most minimalist arcade games since the advent of colour displays, and while the series has evolved in technical terms and the gameplay has become more sophisticated, the core values at its heart haven't changed an iota. This is shmupping as the Victorians would have designed it: austere and character-forming, if by 'character' you mean 'a big hard callus on your fire-button finger'.

This feature was going to start with an intro referencing the bit in Orwell's prophetic future vision *Nineteen Eighty-Four* – if you haven't read it, put this down *now* and do so – where the hero – SPOILER ALERT – is tortured by a member of the Thought Police, until I forgot which bit I was going to quote to draw the most apt analogy. But that should give you an idea of the sort of atmosphere the game's design conjures up once you start to examine it, so let's do that.

'Shmupping' sounds like it should mean something rude, doesn't it? Write in if you've got any ideas! (*Totally don't – Ed*)

1984
1942 (ARCADE)

The enormous and lasting popularity of *1942* is something of a mystery, since it obeys none of the usual rules governing mainstream acceptance. There are no rewardingly massive power-ups, no pretty scenery – the majority of the game is played out against a backdrop of plain blue sea, and when you do get to fly over some land it's drab and ugly – and practically no variation in enemies or attack wave patterns; you've seen almost everything the game has up its sleeve by the end of Level 1. It's brutally, implacably hostile – the tiniest lapse of concentration and you're dead, painstakingly gathered upgrades snatched away in a blink – and it sounds like someone hurriedly grating an underfed budgie. Even your secondary power (the loop the loop) is the world's most useless emergency move since hyperspace in *Asteroids* and *Defender*, which randomly killed you about one time in every five you used it, usually putting you back in at least as much trouble as you were in the first place and limited to a measly three uses anyway.

Yet it's that very spartan, Presbyterian air that seems to give the game its appeal – this is a test of stamina as much as co-ordination, and if you've given in to the temptation of the arcade's flashier attractions, a bout of *1942* leaves you feeling that you've cleansed your soul with honest masochistic penance. That's my best guess, anyway.

PLAY IT NOW ON: In addition to the many home ports of the time and, of course, the MAME version, *1942* has been well served with more modern ports, from the GBA version and the PSone's *Capcom Generations* up to the more recent iterations on the PS2, Xbox and PSP. Any of them will do you nicely.

» Not many people get far enough into *1942* to see the more scenic stages, so here's a shot of one of them. Okay, it's not Picasso or anything, but it makes a change from sea.



» Of course, on some levels it might actually have been better to do away with the background graphics. Trust me, you're in there somewhere.

1986
1942 (SPECTRUM)

1942 was converted rather variably to most of the popular home formats of the time – the NES port is pretty faithful, the C64 one so atrocious it doesn't really count as the same game at all – but the Speccy version published by Elite merits a separate mention because it's a truly remarkable piece of work. It takes a game that was already absurdly spartan and unforgiving and strips it down still further, until it achieves an almost Zen level of minimalist brutality.

For all those people who were finding the original too easy, the Spectrum *1942* starts off by dramatically reducing the player's manoeuvring space. Where in the arcade your fighter takes up just one ninth of the available screen width, on the Speccy it's a whopping one sixth, instantly making it much harder to avoid enemy planes and bullets (see 'The Impossible Dream' boxout). Kicking a man when he's down, developer Syrox also decided to take away all your power-ups at the end of a level – the arcade version let you keep them until you died – and remove the occasional bonus rounds that were the coin-op's only respite from otherwise relentless attack.

The extreme Puritanism also extends to the aesthetics, above and beyond the natural limitations imposed by the Spectrum's hardware. While *1942* was probably the only arcade game ever that the original 48K Speccy *was* capable of an accurate sonic replication of, Elite's version did away with sound almost entirely, with nothing but a tiny '*plut*' when you fired and a brief burst of scratchy noise when you died. More impressively, in some levels the game even did away with graphics, too: in stages that took place exclusively over water (eg the fourth level, or '29' as the game calls it), Speccy *1942* doesn't feature so much as the occasional pixel of wave froth to signify your forward movement, the entire level being depicted as a single static block of cyan.

PLAY IT NOW ON: The Spectrum version of *1942* can be played on the excellent EmuZWin, which is also the best free Speccy emulator.

The Definitive

194X

1987

1943: THE BATTLE OF MIDWAY (ARCADE)

Rather unusually for a sequel, *1943* is the exact opposite of its predecessor, in almost every single way. Big graphics, 'event' bosses, thunder-and-lightning power-ups (literally), more variation – boat attacks, plane attacks and constant introductions of new kinds of enemy waves, even though the 16 stages are basically the same one repeated over and over – relatively chummy and forgiving design – the energy-bar system means you can soak up loads of hits without losing any of your power-ups, and energy refills are never very far away – and stirring martial music make for a big, brash experience that is far removed from the stern and serious examination provided by *1942*. Go figure.

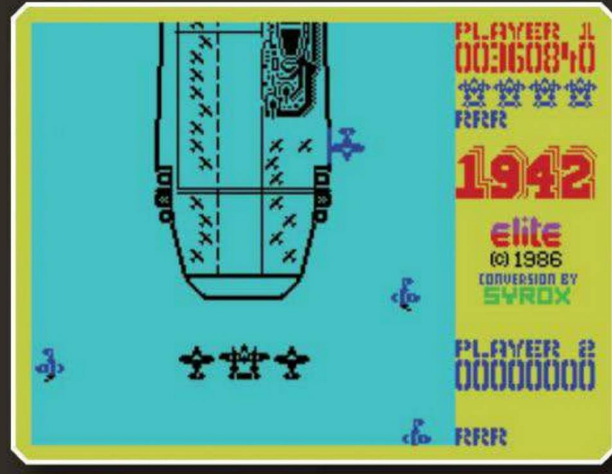
What a lot of people don't understand about *1943*, though, is just what an unusual and unconventional shmup it is, even aside from its differences to its predecessor. Off-hand, it's hard to think of another shmup in the entire history of gaming that copies its central life mechanic, whereby you effectively have a shield that constantly depletes whether you get hit or not, with a single impact on your unshielded craft ending the game. Where *1942* is all about precision danger avoidance, the sequel throws swarms of enemies and bullets at you that you've got little chance of dodging, but then showers you with lots of energy pick-ups to make up for it.

Perhaps understandably given the circumstances, *1943* is a real mixed-up kid. Power-ups run out whether you use them or not. Secondary attacks save you from colliding with enemies or bullets but deplete your energy by the same amount as just crashing into them would have done. Special weapons inexplicably jam against certain enemies, or send you into a useless loop instead, even though you've got plenty of energy for the attack. Collecting two wingmen somehow doubles your firepower instead of tripling it. More enemies attack you from behind than in front, but you have no rear-firing armament. The 'Auto' power-up doesn't autofire, but the 'Shell' one does, and so on. There's more weird stuff going on in *1943* than we've got room for here, frankly.

PLAY IT NOW ON: *Capcom Classics Collection* (Xbox, PS2). The original home ports of *1943* deserve separate comment, so read on.

THE IMPOSSIBLE DREAM

Fancy a challenge? Here's a task that should keep you busy most of the day. As well as making it harder to dodge enemies generally, the reduced screen space in Speccy *1942* makes holding on to your 'wingman' drone planes for more than a couple of seconds virtually impossible. Your mission is to try to get to the end of any stage with just one of them intact – we'll even give you the poke 50819,195 to make your main fighter invincible so you can use it as a sort of shield. And if you're up for the challenge, the first person to send in proof – that's a proper save state or replay file, not just a faked screenshot – of keeping *both* wingmen alive all the way to the end of a level, will win our unending respect.



» This never actually happens.



» If you stop firing for ten seconds or so during the later stages of *1943*, you'll end up with a screen looking like this. And then die very quickly.

THE WAR AT HOME

1943 had a very wide range of home ports, covering almost all the popular formats of the era with extremely varying degrees of success. At the top end was the splendid Amstrad CPC port, which did an excellent job of preserving the feel of the coin-op despite changing some of the gameplay fundamentals – power-ups lasted until you got shot, *1942*-style, rather than timing out, and if the lightning-bomb attack is present this reporter's never been able to find it. And the Spectrum version also did a pretty decent job, albeit with a very strange white-and-blue colour scheme that made it rather hard to pick out enemy shots, as well as most other things.

The Amiga and ST versions caused considerable controversy, being advertised with wildly misleading and untruthful screenshots, showing far better graphics than the finished game actually had, and depicting things like a simultaneous two-player mode that didn't really exist, hiding a pair of dreadful ports where you were only allowed a single shot on screen at a time. At the bottom of the barrel, though, was the Commodore 64 game, an absolutely abysmal conversion bearing almost no resemblance to the arcade game and playing more like an apology for the machine's diabolical previous port of *1942*.









» Top: *1943* (complete with two-player mode) on the Amiga and ST as it was advertised, alongside the words "Screen shots from Atari ST version." » Bottom: *1943* on the Amiga and ST as it looked at the same points.

Oddest of all was the NES version, a radically different game with 50 per cent more levels (24 rather than 16), in which you could intermittently distribute resource points to your fighter to improve its various offensive and defensive attributes – you couldn't even access some of the fancier weapons, for example, until you'd allocated enough points to 'Special Weapon Power'. (In compensation, though, you're armed with an *R-Type*-style charge-beam laser from the start.) Less frantic than the coin-op, it's actually a rather nicer game, and passwords give you a chance of getting through all the extra levels.

1987

1943 KAI (ARCADE)

1943 Kai has a rather strange premise. It's odd enough that Capcom, a Japanese company, would make a game focusing entirely on the real-life defeat of the Japanese at Midway in the first place. You don't, after all, find a lot of German developers writing WWII first-person shooter games where you play the Red Army. But hey, if the global economy is where the money is, that's who you cater to, right?

What's even stranger, though, is to then put out a 'remix' of the game, with graphics that are redrawn to look more like the actual Japanese aircraft of the time, and in which you have to shoot down even more of them in order to see the end screen, which waves a big Stars and Stripes and plays *The Star-Spangled Banner* over a triumphant summary, in English, of how the Japanese got a big shoeing from the heroic Yanks, and then *only release it in Japan*. Perhaps it's some kind of national act of contrition for Pearl Harbor or something.

Anyway, *Kai* is a sort of super-intense distillation of *1943*, with new graphics, new music, new scoring and most noticeably a new colour palette – in particular, the 'sunset' levels, where the sea and clouds are a deep orangey red – and all the action squeezed into just ten stages instead of its parent's 16. To help you cope with the scarier enemy forces your armaments are beefed up somewhat – you get one entirely new weapon – a double laser, which can be upgraded by one additional level – plus a more powerful version of the useless 'Shot Gun' from the earlier game. The 'Auto' and 'Three-Way' power-ups have also been combined into one, to ease the pain on your firing finger a little, and your twin wingmen, which don't appear until several levels into *1943* Vanilla, and then only very occasionally, can be collected from every normal 'POW' icon. (Unlike the first *1943*, all the 'POW' icons, rather than just some of them, can be shot to change their contents.)

It's an altogether more coherent, tighter and less random iteration of the game, arguably the best in the entire series, and it's a real shame that it didn't get a Western release.

PLAY IT NOW ON: The only home port of *1943 Kai* at the time was the very good one for the PC-Engine, although it's a little easy, as a bug often prevents your special weapons from ever running out, which runs beautifully on MagicEngine. You can now play it – in full English for the first time – on *Capcom Generations* for the PSone, the *Capcom Classics Collection* for the PS2 and Xbox, and *Capcom Classics Reloaded* on the PSP, though.



» A smashing orangey bit. Interestingly, with both *1943* and *1943 Kai* all the compilation versions make a significant (and welcome) alteration to the gameplay, by putting the special attack and loop controls on to separate buttons to give you more control over what you're doing. (As well as giving you an RSI-preventing rapid-fire option for all weapons, in case you're a wimp.)



The Definitive

194X



» Hang on – if this is *'Counter Attack'*, does that mean it's a Japanese revenge mission against the US? And if it's a counterattack, how come it's set before the previous games? What's going *on*?

1990

1941: COUNTER ATTACK

To be fair to Capcom, one thing you could never accuse it of with the *194X* games was just churning out a string of identical sequels. In fact, the series seems to be used more as a sort of experimental testing ground for new ideas, which can be refined in other shmups. Certainly, it'd be hard to imagine a game that's much less like *1942* and *1943* than *1941* is. (Man, this is going to get confusing by the end of the feature.) The 32 levels of the first game and the 16 levels of the sequel are now down to just six. You've also got a sort of halfway house between *1942*'s lives and *1943*'s energy bar, power-ups now cycle by themselves rather than giving the player control of which one to pick up, turning upgrading into a *Raiden*-type timing challenge, and you now have a secondary charge-up shot that neither runs out nor uses up any of your energy.

The most radical of the many evolutions of the design, though, is the introduction of horizontal as well as vertical scrolling, which also brings an element of *Gradius*-style scenery avoidance to the gameplay. (It's not the only *Gradius* steal in *1941: Counter Attack*, either – as well as the traditional *194X* fixed wingmen, some levels instead give you 'Option'-type drone fighters which trail behind you as you move.) Your fighter is funnelled down river canyons and through huge factories and underground bases, in constant danger of being smashed against walls or cliffs – although, implausibly, your machine guns are capable of blasting away entire rock faces – and enemies lurk sneakily behind these obstacles where your forward-firing shots can't reach them.

1941 isn't a terribly likeable game. It's poorly balanced, with even your best weaponry hopelessly inadequate for dealing with all the forces that are flung at you, and even more so than *1943* it particularly enjoys launching attacks from directions you can't fire in. You're constantly assailed from behind and the sides, but have absolutely no weapons available at any time that shoot in those directions – unless you count the loop, which here functions as a sort of smart bomb and takes one of your four energy blocks – and the game is a continual dispiriting struggle against this obvious unfairness. By halfway through, when the boss battles get so long you're scared you'll miss a birthday, you'll need extremely dogged persistence to bother continuing, because, in keeping with its lineage, there's precious little reward for all your suffering.

PLAY IT NOW ON: Again, the PC-Engine – or, more accurately, its upgraded version, the Super Grafx – was the only home format to get a *1941* port at the time, and it was an excellent one. Now, however, you can endure it on *Capcom Classics Collection Vol 2* for the Xbox and PS2, or *Capcom Classics Collection Reloaded* for the PSP.



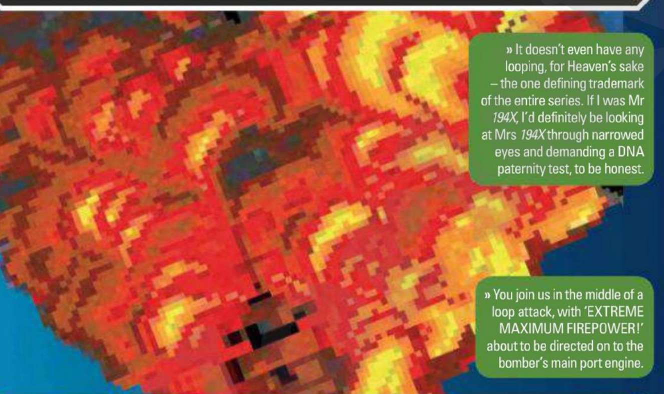
1996
19XX: THE WAR AGAINST DESTINY

19XX is the odd monkey out at gatherings of the *194X* family, and not just because it doesn't have a '4' in its name. It's the only one not to be identifiably set in the WWII period, and the only one that doesn't take place primarily in the Pacific Islands setting, as stages take in tropical jungles and Arctic ice fields, among others. It simply doesn't feel like the rest of the series. In fact, with the hectic action, big graphics, showers of medals and complicated weapons system, it would sit much more comfortably as part of the *Raiden Fighters* series, which debuted in the same year and which *19XX* resembles far more closely than any of the other *194X* games in character.

As was the fashion of the time – and also like *Raiden Fighters*, and unlike any other *194X* game – you get a selection of variously abled aircraft to fly. In *19XX*, though, the choice seems to be almost totally meaningless, since all three types of plane can use the same weapons to only marginally different degrees of effectiveness, in as much as it's possible to tell how effective they're being at all amid the over-the-top chaos of your armaments. The game features several really stupid set pieces with crassly mixed perspectives – such as the boss fight where you appear to be flying vertically backwards down a waterfall while a helicopter gunship somehow hovers in the Z-axis with its nose pointing straight down, dropping tanks on parachutes at you that are presumably going to land *in a river.* On top of this, the stirring militaristic music of all the previous games has been replaced with some awful, poncy, whiny, noodly soft jazz rock that makes you hate the game's musicians more than its enemies.

Of its nominal siblings it has most in common with *1941* – with a distinctly similar look and palette and an equally poor balance of firepower – but it neither thematically nor qualitatively belongs with them, being considerably worse than even its immediate predecessor. This is one of Capcom's worst shooters since the bad old days of *Vulgus* and *Exed Exes* and we really, really want to stop talking about it now.

PLAY IT NOW ON: There are no home versions of *19XX*, which you should take as a sign. There's a reason this game was left off the numerous and otherwise-comprehensive Capcom retro collections.



» It doesn't even have any looping, for Heaven's sake – the one defining trademark of the entire series. If I was Mr *194X*, I'd definitely be looking at Mrs *194X* through narrowed eyes and demanding a DNA paternity test, to be honest.

» You join us in the middle of a loop attack, with 'EXTREME MAXIMUM FIREPOWER!' about to be directed on to the bomber's main port engine.



2000
1944: THE LOOP MASTER

With diminishing returns from the later games in the series, Capcom had a bit of a rethink in 2000, and decided to move the game in yet another new direction. Taking its cue from the likes of the company's 1999 hit *Giga Wing* and the following year's *Mars Matrix*, *1944* moved from the vertical orientation of the previous games to a horizontal one, freeing players from the cramped and increasingly claustrophobic screens of *1941* and *19XX* and giving them some room to manoeuvre again.

Otherwise it's something of a back to basics approach, with just the single classic Lightning fighter and one type of main shot, in addition to a smart bomb and a rather splendid merging of loop the looping with a charge attack, whereby holding down the shot button builds up a bar until you loop high into the sky and dive down on the enemy while hammering them with concentrated and devastating fire. (You can even part-charge the bar during quiet moments, and if you're out of smart bombs you can send your wingmen on an explosive kamikaze mission instead – you can build up a squadron of over 50 to keep in reserve.)

Much less complicated than any of the other sequels, *The Loop Master* feels rather like a fusion of the ethos of the original *1942* with the coincidentally named *Strikers 1945*. It played out over 15 levels and, back in the classic Pacific Islands setting, culminating in a truly awesome boss, it's a much longer challenge than most shmups of the time. The only fly in *1944*'s ointment is an ill-judged and deeply horrible soft-metal soundtrack on most of the stages, for which someone ought to have a motorbike helmet full of angry wasps jammed onto their head. It's hard to say which is ultimately best out of this and *1943 Kai*, but both are first-division, old-school shooters and should be your first stops when investigating the series. *1946*, a stats-based RPG where all the pilots are demobbed and have to readjust to life on Civvy Street, will probably be quite a lot duller.

PLAY IT NOW ON: As yet there's been no home version of *1944*, so emulators like MAME are your only option if you don't have room for a bulky coin-op in your kitchen. And you'd be wise to invest in an arcade joystick, because the constant fire-button pummelling of *1942* is back with a vengeance here – no wussy rapid firing for *1944* – and if you use a gamepad your thumb will fall off.

DREAMCAST


Dreamcast
POWER
OPEN
SEGA
Dreamcast
Dreamcast
Dreamcast
Dreamcast



A BRIDGE TOO FAR OR MISUNDERSTOOD MASTERPIECE? WHATEVER YOUR OPINION ON SEGA'S FINAL FORAY INTO THE VIDEOGAME HARDWARE SCENE, THERE'S NO DENYING THAT THE DREAMCAST IS WORTHY OF A SECOND LOOK. JOIN LIFELONG SEGA FANBOY DAMIEN MCFERRAN AS HE TEARFULLY REVISITS ONE OF THE INDUSTRY'S MOST UNDERRATED CONTENDERS

Year released: 1998 (Japan), 1999 (US/Europe)

Original price: £200 (UK)

Buy it now for: £105+

Associated magazines: DC-UK, Official Dreamcast Magazine

Why the Dreamcast was great… Sega's 128-bit console promised arcade-perfect gaming and the ability to go online for under £200. A flood of Sega classics followed, and although Sony's PS2 was technically superior it took a while for it to catch up in terms of quality games.

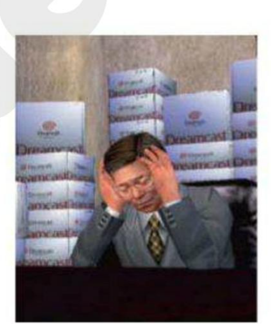
Sega's Dreamcast holds a special place in the history of home videogame entertainment. It was an innovative beast, being the first 128-bit home console to offer online connectivity out of the box and setting the modern trend for sourcing internal components from PC manufacturers. It also proved to be Sega's last entry in the notoriously difficult hardware development race and brought an end to the days when arcade conversions sold consoles. Released in 1998, the ill-fated machine would be culled just three years later by a Sega undergoing seismic internal restructuring that would ultimately see the company emerge as one of the world's leading third-party software publishers.

The Dreamcast enjoyed a somewhat convoluted genesis. Back in the late-Nineties, Sega was still smarting from dismal hardware disasters such as the Mega-CD and 32X, and its Saturn console was losing the 32-bit war against Sony's PlayStation. As is usually the case when companies are against the wall, cracks began to appear inside Sega's corporate architecture. Newly appointed Sega of Japan president Shoichiro Irimajiri decided that the company's internal hardware development division was firing blanks and was determined to look elsewhere for the talent to create a new machine. This was not an entirely new stance; as early as 1995 there were rumours that the Japanese company would team up with aerospace firm Lockheed Martin to develop a new graphics processing unit (GPU), and while this proposed union came to nothing it set the wheels in motion for further excursions abroad in search of new hardware partners.

Around 1997 Irimajiri decided to enlist the services of Tatsuo Yamamoto from IBM Austin to work on a new hardware project. The idea was that the team would operate externally and therefore be unhampered by the internal politics that were pervading Sega's Japanese HQ at the time. Unsurprisingly, when Hideki Sato – head of hardware development at Sega Japan – caught wind of this he was less than happy and made it clear that any technical production should happen within the walls of Sega's Japanese HQ. This resulted in two different teams working in secrecy on two different prototypes in two different parts of the world.

'Black Belt' was the original codename given to the machine being constructed in the US, which was based around 3dfx Interactive's Voodoo 2 graphics technology. The Japanese counterpart was initially known as 'White Belt' (later 'Katana') and made use of NEC/VideoLogic's PowerVR2 chip. Both machines utilised 'off the shelf' central processors, with the American team picking the IBM/Motorola PowerPC 603e and its Japanese competitors favouring Hitachi's SH4. Ironically, despite Irimajiri's bold move of outsourcing development, it was Sato's team that ultimately won in the end with the 'Katana' prototype being selected as the basis

"SEGA'S DREAMCAST WAS AN INNOVATIVE BEAST THAT CONTINUES TO HOLD A SPECIAL PLACE IN THE HISTORY OF HOME VIDEOGAME ENTERTAINMENT"



» Yukawa Hidekazu's tortured cameo in the *Shenmue* demo ended up being prophetic in ways Sega possibly didn't imagine.

INSTANT EXPERT

The PAL Dreamcast came with a lowly 33.6kps modem, but the US machine boasted a faster 56kps variant. Both were later superseded by a broadband adapter.

Sega never officially released the light gun peripheral in the US amid fears about the negative perception of gun crime at the time.

The rather limp UK advertising campaign didn't feature any videogame footage at all, instead relying on seemingly unconnected imagery and the vocal talents of Robbie Williams.

There is no reset button on the machine; instead users must press all the fascia buttons and the start button at the same time to return to the boot menu.

The Hong Kong/Asian edition of the machine did not ship with a modem; in its place was an empty, modem-shaped piece of plastic.

Sega had originally intended to place 8MB of RAM in the console, but it had to up this to 16MB when it found that graphical memory demands were higher than expected.

***Shenmue* is one** of the few Dreamcast games to sell over a million units, yet its commercial performance was well short of expectations and the expensive project failed to actually generate a profit.

In Japan and the US the Dreamcast swirl is orange, but it had to be changed to blue in Europe due to a German company using the exact same logo.

In an attempt to battle the PS2, Sega Europe started bundling a DVD player with the Dreamcast for the same price as Sony's machine. The ploy wasn't a success.

Sega's final Dreamcast game was 2004's *Puyo Pop Fever.*

DREAMCAST



» Sega Japan's head of hardware development Hideki Sato.

ADVERTS

Now regarded as one of the most inventive and amusing advertising campaigns in videogame history, Sega of Japan's Dreamcast promotions were refreshingly self-deprecating. They featured real-life Sega managing director Yukawa Hidekazu getting in to all kinds of unpleasant situations as he dutifully attempted to make the fledgling console a success. The 30-second advertisements proved that not only did Sega have a sense of humour, but it was also willing to admit it had made mistakes with past hardware and that the Dreamcast represented a fresh start. The campaign was a tremendous success with Japanese audiences and Hidekazu became a star overnight; scenes from the adverts were plastered over the packaging of promotional consoles and the humble managing director even featured in the *What's Shenmue?* demo disc – sitting in a warehouse packed with unsold Dreamcasts.





» Sega MD Yukawa Hidekazu and president Shoichiro Irimajiri hawk Dreamcasts on launch day.

for the new machine. Naturally, rumours abound that Irimajiri's move was merely a bluff in order to give the Japanese hardware division a much-needed kick up the backside. A disgruntled 3dfx promptly sued for breach of contract, claiming that documents had been signed that stated that Sega would use its technology in the proposed 'Black Belt' concept for the new console – the first version of *Metropolis Street Racer* started development for the 'Black Belt' and Bizarre Creations even had a prototype of this hardware. The two projects, which had been kept top secret up until this point, were made known to the world thanks to 3dfx's lawsuit against both Sega and PowerVR2 manufacturer NEC. The former was reportedly furious about having its dirty washing aired so publicly and the legal impasse would later have to be settled out of court for an undisclosed sum. Needless to say, it marked an inauspicious start for the life of the new super console.

With the technology decided upon, the next step was to give the new project a name. With Sega's stock pitifully low, the company was well aware that any new machine would have to represent a new beginning and distance itself from the tainted public perception created by the poorly performing Saturn. To the Sega management, this meant one thing: completely remove the Sega name from the console and establish a new gaming 'brand' in the same way Sony had done with the successful PlayStation. According to reports, over 5,000 different names were considered, with the positive-sounding 'Dreamcast' winning out. A combination of 'dream' and 'cast' – as in the way a magician would cast a spell – this pleasant moniker hinted at the expanded connectivity that the system would eventually bring to the home via its online services. Thankfully for fanboys, Irimajiri's management team would later wisely relent and permit the Sega logo to be reinstated to the console's outer casing.

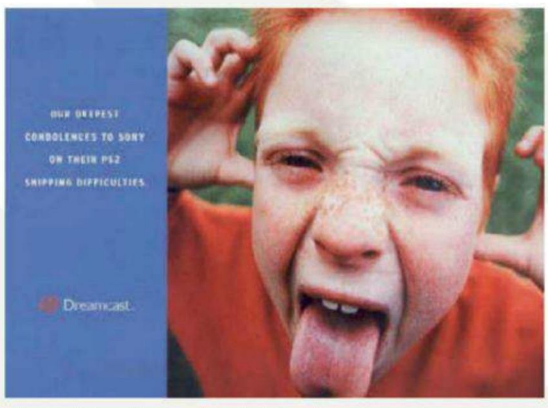
"SEGA PROVED HOW SERIOUS IT WAS ABOUT THE DREAMCAST, AS AROUND $500 MILLION WAS EARMARKED FOR THE DREAMCAST WORLDWIDE, WITH ROUGHLY HALF OF THAT FIGURE BEING SPENT ON CREATING THE HARDWARE AND SOFTWARE"

» Capcom provided sterling support for the Dreamcast. If you were a fighting game fan and owned the machine, then you were very happy indeed.

Internally, the new system was a marvel of cost cutting, 'off the shelf' componentry – Sega had certainly learnt valuable lessons from the failure of the Saturn. The Dreamcast's 32-bit predecessor was badly hampered by high production costs and the complex nature of the hardware made it difficult for programmers to get the most out of the system. With the Dreamcast, Sega made sure the console was cheap to manufacture by using parts more commonly associated with PCs. The motherboard was a masterpiece of clean, uncluttered design and compatibility, with Microsoft's Windows CE operating system meaning that development would be a potentially pain-free exercise – although it should be noted that, in the long term, programmers favoured Sega's own development tools over Microsoft's. In order to keep costs down, the decision was made not to include a DVD drive, as the technology was still quite expensive at the time. Instead, Sega used its own proprietary GD-ROM format, which could store a gigabyte of data. Not including DVD compatibility would later prove to be a costly mistake.

If proof is needed to ascertain how serious Sega was about the new machine, one only has to look at the amount of money involved in designing, creating and marketing the console. Around $500 million was earmarked for the Dreamcast worldwide, with roughly half of that figure being spent on creating the hardware and software. The rest was splashed on promoting the machine all over the globe. Irimajiri, who found fame and fortune in the automotive industry with Honda, jokingly commented a few months before the Japanese release that the figures baffled him – car manufacturers would spend roughly the same amount on creating a new automobile, yet here was Sega throwing millions at the production of a diminutive box that sits under your TV. Nevertheless, Sega's Japanese president was well aware that this was the amount of capital it took to get a new machine on the shelves and into the consciousness of the consumer. The company knew that it would take something special to regain market share from the dominant Sony. "We have the strength of a beaten company," Sega's PR guru Yasushi Akimoto commented at the time. But for all this bravado, the new hardware launch was undoubtedly a huge gamble. The poor performance of the Saturn had pushed Sega into the red, and even before the Dreamcast hit store shelves in Japan the distressed firm had posted a shocking 75 per cent drop in half-year profits. With such a massive amount of money being devoted to doing battle in the console arena once more, the top brass at Sega knew that this could potentially be the last throw of the dice.

Nevertheless, as the console's Japanese launch grew ever closer there was a tangible sense of confidence in the Sega camp. Consumer interest was high and retailers reported that strong pre-orders were expected. However, this optimism was knocked slightly when NEC made the shock announcement that it was struggling with the manufacture of the PowerVR2 chipset. Issues were being encountered when the company mass produced the chip at the required 0.25 micron thickness, with one-in-three processors failing to meet production standards, and this invariably resulted in Sega



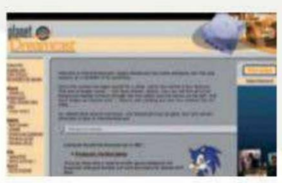
» Sega wasn't above taking cheap shots at its rivals, as this American advertisement proves.

COMMUNITY THE BEST DREAMCAST WEBSITES

Planet Dreamcast

www.planetdreamcast.com

Affiliated with the IGN network, this is a great resource for all things Dreamcast-related. If you're digging around for some decent software reviews or just want to get yourself acquainted with the history of the console, this should be one of your first ports of call.



DC News

dreamcast.dcemu.co.uk

Predictably most modern Dreamcast sites are concerned with emulation, seeing as many high-spec PCs can now comfortably pretend to be Sega's 128-bit machine. This site is an intriguing snapshot of what is possible when amateur coders really put some effort in.



Dreamcast-Scene

www.dreamcast-scene.com

Another site with a heavy 'emu' bias, and we're not talking about that bird Rod Hull used to hang about with. However, there's lots of other interesting content on here too, as well as a nice community that is dedicated to keeping the memory of the machine alive.



Dreamcast Junkyard

the-dreamcast-junkyard.blogspot.com

A collection of often-amusing blog posts that deal with almost every aspect of the Dreamcast. Entertaining and passionate, it's also one of the few fan sites on the net that still gets regular updates and is well worth looking into.



KEEPING COOL

Due to the raw power contained within the console, it was deemed necessary to fit a cooling fan to keep the internal components from overheating. Sega even employed unique heat sinks to keep the main CPU and GPU chips from getting too toasty. This bizarre setup was rumoured to use liquid to carry heat from the chips to the fan using metal pipes via the principle of 'convection circulation'. However, before you excitedly go opening up your PAL machines in order to gaze upon this remarkable feat of technical engineering, it's worth noting that it was sadly only utilised in Japanese launch consoles, and we've only just discovered from an ex-member of Sega's PR that the presence of liquid inside the pipes was actually true. Manufacturing improvements meant that main chips generated less heat and therefore the internal fan proved to be more than enough to keep things running smoothly.

having to halt Japanese pre-orders, which had reached around 80,000 by this stage, and reduce the projected number of units available at launch from 500,000 to 150,000. To make matters worse, several key titles such as *Sega Rally Championship 2* and *Sonic Adventure* were also hit by development delays.

The machine was finally launched in Japan on 27 November 1998, and the 150,000 available units promptly sold out before the day was over. In an eerie echo of the Saturn launch four years earlier, the only title really worth bothering with on day one was *Virtua Fighter 3: Team Battle*. Unperturbed by the PowerVR2 production fiasco, Sega confidently predicted that it would sell half a million units by March 1999. When this target was missed and the news started to filter through that key software titles were failing to sell in the numbers expected – Capcom's stunning *Power Stone* was one high-profile commercial disaster, prompting a public apology from the developer, which wrongfully seemed to assume the end product wasn't up to scratch – those individuals inside the walls of Sega of Japan's boardroom started to worry. Prior to the Western launch the price of the Japanese console was reduced from ¥29,000 (£185) to ¥19,900 (£125), effectively removing all profit from hardware sales. The reduction had the desired effect and units started to sell in larger numbers, although this could have had something to do with the release of Namco's superlative *Soul Calibur*, which, when confirmed as coming to Sega's 128-bit console, caused a 17 per cent jump in the value of Sega's shares.

As the Dreamcast was struggling to maintain pace in its homeland, Sega's American and European divisions prepared to launch the console in their respective territories. The North American release occurred on 9 September 1999, with the European debut taking place just over a month later. The US launch was an astonishing success, with Sega struggling to meet the initial demand for the product. Half a million Dreamcast consoles found their way into US homes in the first two weeks alone – something the machine had failed to do in several months in Japan. The company proudly boasted that it made $98 million on software and hardware sales thanks to the 9 September launch; by anyone's standards it was an amazingly successful introduction and ranks as Sega's most successful hardware launch in the territory. In Europe the figures made for equally encouraging reading; by Christmas 1999 half a million units had been sold, meaning that Sega Europe was six months ahead of schedule.



» *Shenmue* was arguably the most high-profile Dreamcast release and proved to many that the machine was a true next-generation proposition.

Given Sega's strong coin-op heritage, the Dreamcast unsurprisingly saw many arcade conversions during its life span. Shortly before the Japanese launch, Sega announced that it would be replacing its popular Model 3 arcade hardware with a new standard called NAOMI (New Arcade Operation Machine Idea). NAOMI and Dreamcast were essentially the same systems, with the former possessing twice as much RAM and four times as much sound memory. This meant that home conversions were more often than not exact replicas of what was seen in the arcade, and for the first time since the days of the Neo-Geo AES the term 'arcade perfect' actually meant what it said. A slew of Sega-produced arcade ports arrived including *Crazy Taxi*, *Outtrigger*, *18 Wheeler*, *F335 Challenge*, *Dynamite Deka 2* and *Virtua Tennis*. Superb support also came from many leading Japanese arcade companies, most notably former Saturn ally Capcom, which not only released some excellent NAOMI titles (*Capcom vs SNK*, *Marvel vs Capcom 2* and *Project Justice* to name but three), but also



DREAMCAST

OTHER VERSIONS WHEN ONE MACHINE ISN'T ENOUGH

Divers 2000 CX-1
Shaped like Sonic's head, this all-in-one solution remains one of the most desirable pieces of Sega hardware. Bundled accessories included a keyboard, rumble pack and headset. It even had teleconference software and a remote for when you wanted to use it as a bog-standard TV.



Hello Kitty
Years before Nintendo cornered the female gamer market with the pink DS, Sega of Japan had been wooing young Japanese schoolgirls with this sickly sweet limited edition Dreamcast. Strictly limited to 2,000 units, many grown men hanker after this effeminate piece of hardware.



R7
The R7 was originally manufactured as a network console in pachinko parlours in Japan. Predictably many units have made it out 'into the wild' and into the hands of Sega collectors. The sleek black exterior reminds us of the Mega Drive, which is certainly no bad thing.



Treamcast
Not strictly an official hardware release, this Chinese modification was sold as a 'portable' solution for Dreamcast fans. Complete with a TFT screen and carry case, it offered incredible power on the move but unsurprisingly didn't trouble the established handhelds of the era.



seemed to release a new 2D fighter on an almost weekly basis, with titles like *Street Fighter III*, *Darkstalkers/Vampire Chronicle* and *JoJo's Bizarre Adventure* proving that Capcom was as serious about standing by the Dreamcast as it had been with the Saturn. Capcom offered another title for Sega's machine, a game that was arguably more important than any of its available fighters. *Resident Evil Code: Veronica* instantly caused a large amount of buzz for Sega's system, mainly down to the fact that the series, until that time, had been entirely Sony-exclusive. The game was eventually ported to the PlayStation 2 and even Nintendo's GameCube as *Code: Veronica X*, but many fans feel the Dreamcast original was far superior.

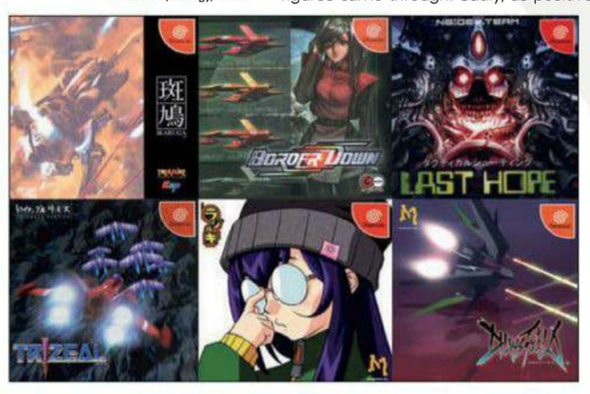


» Small but perfectly formed – the Dreamcast VMU was a neat idea but never really made the impact it should have done.

Unfortunately, consolidating further third-party support wasn't going to be easy. Companies like EA had been burnt by the failure of the Saturn and ignored the Dreamcast throughout its life, choosing instead to stick with the far more profitable PlayStation – it was believed at the time that EA was offered favourable publishing terms on the PlayStation 2 if it didn't support the Dreamcast. Others adopted a cautious 'wait and see' policy towards the machine, commenting that they would review their stance when solid sales figures came through. Sadly, as positive as the Western launches had been, Sega struggled to keep the momentum going. With Sony's PlayStation 2 looming on the horizon, many gamers decided to stick with their current machine, and as a result interest in the Dreamcast started to wane. Price cuts, like the one witnessed so early on in Japan, predictably followed in the US and Europe, but these failed to be a long-term solution to the problem.

> "THE THRILL OF PLAYING CRAZY TAXI IN THE ARCADE KNOWING FULL WELL THAT A PIXEL-PERFECT CONVERSION AND NOT SOME CUT-DOWN PORT WAS SET TO ARRIVE ON THE DREAMCAST IS AN EXPERIENCE GAMERS ARE UNLIKELY TO WITNESS AGAIN"

» These NAOMI-based shooters kept the console alive long after Sega had forgotten about it. Clockwise from top left: *Ikaruga, Border Down, Last Hope, Chaos Field, Radilgy, Trizeal.*



Invariably, as sales began to diminish, more and more developers chose not to bring their products to the troubled console, and even those that had provided vital support began to lose interest. Namco – an essential partner and the company responsible for the system-defining *Soul Calibur* – dropped Dreamcast support almost as swiftly as it had taken it up. Therefore, throughout the life of the machine, it fell to Sega to produce quality software, but while the company was undoubtedly adept at producing engaging coin-op experiences, it struggled to cater for a new audience of gamers that had been weaned on deeper, more feature-packed titles on the PlayStation. Sega's arcade ports were unquestionably arcade perfect, but in the eyes of many critics that was the problem: arcade machines are designed to entertain in short bursts and don't usually stand up to prolonged play within the home. Contemporary reviewers complained of lightweight coin-op ports and even the feature-rich world of *Shenmue* couldn't alter the often-erroneous perception that the Dreamcast was a machine packed with arcade titles that failed to keep your attention for more than a few hours.

Dreamcast's ace in the hole – online connectivity – could have arrested such a sorry slide, but Sega never really managed to exploit this facet to its fullest potential. The company was unforgivably slow in getting it to the consumer, and while the actual service was up and running from day one and boasted internet access and email connectivity, it was let down by the software getting constantly delayed. When the promise of playing against "six billion players" – a rather lofty boast made by Sega Europe, which seemingly assumed that everyone on the face of the planet would buy a machine – finally came to fruition, it was



» Predating the Wii by a fair few years, the motion-sensitive maracas for *Samba De Amigo* brought joy to many a Sega fan – it's a shame the PAL release was so cripplingly limited.


» The proposed Dreamcast Zip drive – sadly it never made it to the shelves.

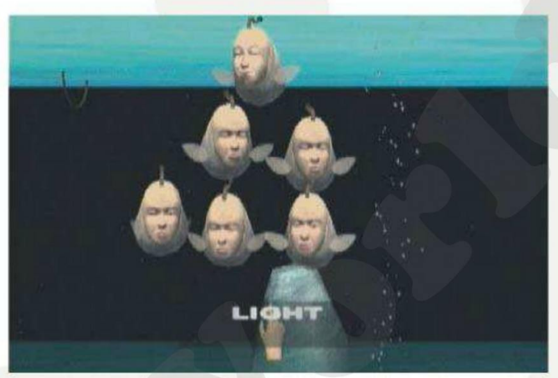
found to be quite underwhelming due to the slow speed of the bundled modem.

When the PlayStation 2 launched in March 2000 after a series of troublesome delays, it became obvious that the writing was on the wall for Sega's 128-bit challenger. Ironically, the PS2's initial line-up of software was arguably inferior to what was being released on the Dreamcast at the time, but Sony's brand was so strong it sold on the name alone. In the US, the Dreamcast was given a shot in the arm as Sega announced that it would grant a $150 rebate – basically the price of a Dreamcast system – to anyone who signed up to the SegaNet service for two years. Another price cut followed, and these two manoeuvres resulted in an astonishing 156 per cent rise in hardware sales. However, it's always worth looking at the bigger picture when quoting numbers like these: the Dreamcast still only held around 15 per cent of the US gaming market, with Sony and Nintendo out in front with 50 per cent and 35 per cent respectively.

Sega was in dire financial straits before the Dreamcast arrived, but its disappointing performance meant the company was in even more trouble. It clearly couldn't continue, and although the announcement in 2001 that Sega would be discontinuing Dreamcast production and moving into third-party publishing came as a shock to hardcore fans, most industry experts had been predicting the move for months beforehand. Sega was quick to point out that games were still in development for the Dreamcast, but for all intents and purposes the Japanese firm had taken its eye off the struggling system and was looking very much to the future.

However, the Dreamcast's connection with NAOMI proved to be a crucial lifeline. The arcade system was incredibly popular and Japanese coin-op developers, finding their earnings diminishing as the industry began to shrink, gladly took up the low-cost solution that NAOMI provided. Over the next few years these companies would keep the memory of the Dreamcast alive with a series of shooting titles that, after successful arcade runs, were granted small-scale domestic releases. Titles such as *Radilgy*, *Trizeal*, *Under Defeat* and *Trigger Heart Exelica* all found their way onto the system, and G.rev's *Border Down* was so highly sought after that it recently received a welcome reprint. Homebrew shooter *Last Hope* was released in 2007 and was followed in 2009 by *Dux*, at the time of writing the last Dreamcast game to receive a commercial release.

Pinpointing exactly why the Dreamcast failed is trickier than you might imagine. Was it lack of third-party support? Over-reliance on arcade conversions? Poor support of online services that could have set it apart from its rivals? Lack of a DVD drive? The impending release of the PS2? Poor marketing in key territories? The most likely answer is that it was a combination of all these factors, but when dissecting the troubled history of the console it's easy to overlook just how potent a gaming platform it was. The thrill of playing *Crazy Taxi* in the arcade knowing full well that a pixel-perfect conversion, and not some cut-down port, was set to arrive on the Dreamcast is an experience gamers are unlikely to witness again. Rudimentary as it was, online play with a console was nothing short of revolutionary at the time, and Sega basically offered access to the internet for under £200 – something that PCs of that era were asking an awful lot more for. With titles of the calibre of *Rez*, *Jet Set Radio*, *Daytona USA*, *Dead Or Alive 2*, *House Of The Dead 2* and *Skies Of Arcadia*, the Dreamcast was unquestionably heaven for videogamers that appreciated the finer things in life. Sadly, out of those "six billion" potential players that Sega spoke about, the message only seemed to get through to a lucky few.



» The unique – not to mention disturbing – *Seaman* made use of the Dreamcast microphone.



» The NAOMI arcade hardware was essentially a Dreamcast with more memory.

EVERYTHING BUT THE KITCHEN SINK

The range of peripherals available for the Dreamcast is nothing short of staggering. As well as the usual arcade stick controllers and dedicated 'fighting type' joypads, there was an updated version of the Saturn's Twin Stick controller for mech-fighter *Virtual On*, a steering wheel, rumble pack, keyboard, fishing rod, camera, microphone and motion-sensitive maracas – for *Samba De Amigo*, naturally. Possibly the best-known addition to the Dreamcast stable was the Visual Memory Unit (VMU), which stored saved game data and acted like a small console when separated from the Dreamcast itself. Sega had audacious plans for this glorified memory card, as did Sony with its PocketStation, but battery life wasn't perhaps as good as it could have been and anyone who has owned a Dreamcast will be all too familiar with the painfully annoying beeping tone a battery-less VMU makes whenever the console is switched on.



» People may have questioned the design of the Dreamcast, but it could have been much worse, as these prototypes attest



DREAMCAST PERFECT TEN GAMES

There are far, far too many great Dreamcast games, so here's a quick roll call of the other titles that just missed our list. *Street Fighter III: 3rd Strike, Sega Marine Fishing, Jet Set Radio, Border Down, Power Stone 2, Castle Of Shikigami II, Crazy Taxi* and *Cosmic Smash*. So many amazing games, so little space.


01

SOUL CALIBUR

» **RELEASED:** 2000
» **PUBLISHED BY:** NAMCO
» **CREATED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** PAC-MAN

01 **While Street Fighter** *III: 3rd Strike* is easily the superior fighter, we've given the beat-'em-up slot to *Soul Calibur* because Namco went above and beyond the call of duty with its actual conversion. Unlike Capcom's *3rd Strike*, *Soul Calibur* offers all the amazing playability and gameplay of the arcade original, but enhances it by delivering a truly staggering additional mode that increases the longevity no end. As well as delivering some truly spectacular visuals, *Soul Calibur* upped the ante on the Dreamcast by offering a whole host of console-exclusive extras including the fantastic Mission mode and more unlockables than you could imagine. Little wonder, then, that it went on to sell over a million copies.

SAMBA DE AMIGO

» **RELEASED:** 2000
» **PUBLISHED BY:** SEGA
» **CREATED BY:** SONIC TEAM
» **BY THE SAME DEVELOPER:** NIGHTS INTO DREAMS

02 **The Dreamcast featured** an astonishing range of peripherals during its release, but none could match the sheer magnificence of *Samba De Amigo*. Essentially a port of the popular arcade game and coming with a set of maracas, *Samba De Amigo* is an excellent rhythm-action game that had players shaking the maracas in a frenzy as they matched the on-screen prompts. With its gaudy visuals and brilliant tunes that ranged from Quincy Jones' *Soul Bossa Nova*, to a bizarre take on A-Ha's *Take On Me*, *Samba De Amigo* proved utterly essential, even if the original package saw little change from 100 notes. Fans may wish to seek out the Japanese-only add-on *Samba De Amigo Version 2000*.


02

RESIDENT EVIL CODE: VERONICA

» **RELEASED:** 2000
» **PUBLISHED BY:** EIDOS
» **CREATED BY:** CAPCOM
» **BY THE SAME DEVELOPER:** POWER STONE

03 **Capcom's fourth Resident** *Evil* title caused quite a stir on its release. Mainly because it was the first time the franchise wouldn't be debuting on a Sony console, but also because it was the first game in the series to use proper 3D backgrounds. Spread over two discs and focusing on the exploits of Claire and Chris Redfield, *Veronica* moves away from Racoon City and focuses on a small island owned by the Umbrella Corporation. Granted, its gameplay is almost identical to the original *Resident Evil*, but it's saved thanks to far more impactful cut-scenes and a shockingly good storyline.

IKARUGA

» **RELEASED:** 2002
» **PUBLISHED BY:** ESP SOFTWARE
» **CREATED BY:** TREASURE
» **BY THE SAME DEVELOPER:** GUNSTAR HEROES

04 **There's a slew** of great shoot-'em-ups on the Dreamcast, but not one of them can touch the sheer elegance of *Ikaruga*. The first of many 'last ever' Dreamcast releases, *Ikaruga* expanded on the duality themes that Treasure explored with *Silhouette Mirage* by having your ship flip between two polarities. While you could absorb bullets that were the same colour as your ship, enemies succumbed quicker to opposing-coloured fire, which presented a superb risk-and-reward system. Add in its complex chain system and Treasure proved that when it comes to high-quality shooters, its pretty much untouchable.

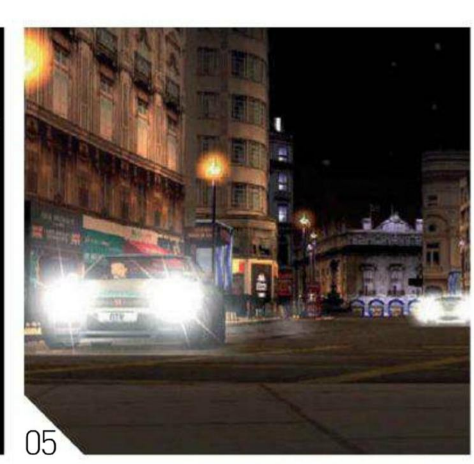
METROPOLIS STREET RACER

» **RELEASED:** 2000
» **PUBLISHED BY:** SEGA
» **CREATED BY:** BIZARRE CREATIONS
» **BY THE SAME DEVELOPER:** GEOMETRY WARS: RETRO EVOLVED

05 **We recently sung** *MSR*'s praises in our top 25 racers, but this innovative racer is so special we're going to mention it again. Part simulator, part arcade racer, *Metropolis Street Racer* was essentially the forefather to the now-popular *Project Gotham Racing*, and delivered a driving experience that few other games of the time could match. With its excellent handling, well-constructed tracks and inventive Kudos system, *MSR* was a welcome alternative to Sega's hardcore racers that were available on its system and proved that Dreamcast owners had little need for Sony's *Gran Turismo*.

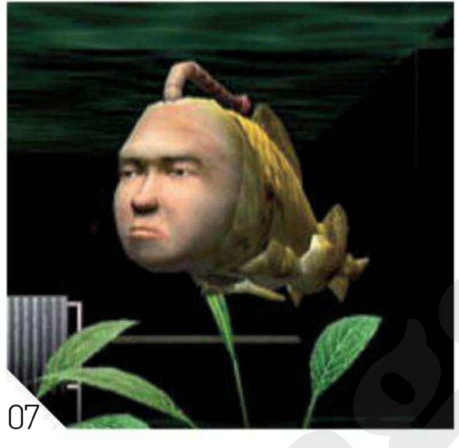

03


04


05




06


07


08

SHENMUE I & II

» **RELEASED:** 1999, 2001
» **PUBLISHED BY:** SEGA
» **CREATED BY:** AM2
» **BY THE SAME DEVELOPER:** SPACE HARRIER

06 **Okay, so we're** cheating here, but you really can't talk about Yu Suzuki's highly acclaimed game without including its incredible sequel. Greatly revered and reviled in equal measures, the *Shenmue* franchise cost Sega millions to make, while *Shenmue III* remains its most requested game. Huge in scope and with an incredibly complex narrative – that annoyingly, has yet to be completed – the *Shenmue* franchise delivered an experience that no other game of the time was able to match. After all, here was a series that not only allowed you to visit an arcade and play many of Yu Suzuki's past hits, but was even able to make menial tasks like working enjoyable.

SEAMAN

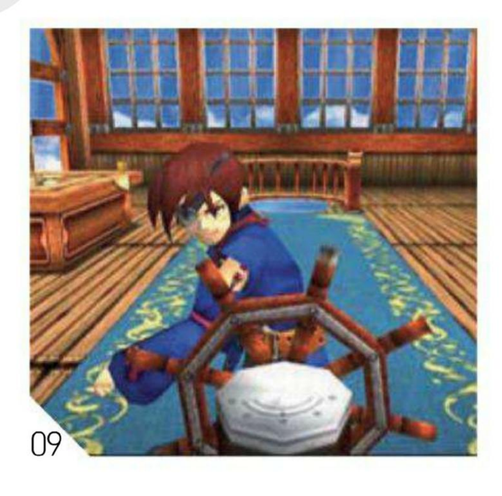
» **RELEASED:** 1999
» **PUBLISHED BY:** SEGA
» **CREATED BY:** VIVARIUM
» **BY THE SAME DEVELOPER:** ODAMA

07 **Sega's *Seaman* isn't** really a game as such, but that doesn't mean that you should miss out on this incredibly clever piece of software. Narrated by Leonard Nimoy, *Seaman* requires you to raise the titular character from an egg to a fully grown adult, and saw you raising and coaxing the creature via Sega's Microphone peripheral. Despite never receiving a UK release, we urge you to track down the US version and a boot disc so that you can experience this utterly bizarre creation for yourself. If you need further insight into *Seaman*'s strange world, visit Lofarius's diary at **www.rllmukforum.com/index.php?showtopic=179577**.

PHANTASY STAR ONLINE

» **RELEASED:** 2000
» **PUBLISHED BY:** SEGA
» **CREATED BY:** SONIC TEAM
» **BY THE SAME DEVELOPER:** SONIC ADVENTURE

08 **Falling asleep at** your keyboard was a common experience in *Phantasy Star Online*. It wasn't due to it being boring, but because it was so damn addictive. Never mind that level grinding was a chore or that phone bills could constantly run into three-digit numbers, Sonic Team had created a world that was so imaginative you couldn't stay away from it. Incredibly basic when compared to recent offerings like *World Of Warcraft*, it's easy to forget what an impact it made on its release and just how successfully Sonic Team had evolved the franchise from its RPG roots.


09

SKIES OF ARCADIA

» **RELEASED:** 2000
» **PUBLISHED BY:** SEGA
» **CREATED BY:** OVERWORKS
» **BY THE SAME DEVELOPER:** SHINOBI

09 **We absolutely adore** *Skies Of Arcadia*. The score is sweeping and magnificent, the world you explore is incredibly huge and full of mystery. Add to this the fact that each and every character you meet is larger than life in a way that only the best RPGs can manage, and you have yourself a beautifully immersive title. Following the story of a young air pirate called Vyse, *Skies Of Arcadia* is a wondrous adventure that's set in a Jules Verne-inspired world where islands float in the sky and flying ships are the main form of travel. While *Skies Of Arcadia* follows the well-trodden path of many other games in the genre, it has been put together with so much passion and love that you can't help but fall in love with it.

REZ

» **RELEASED:** 2001
» **PUBLISHED BY:** SEGA
» **CREATED BY:** UNITED GAME ARTISTS
» **BY THE SAME DEVELOPER:** SEGA RALLY

10 **All right, so the** frame rate is lower than its PS2 counterpart and the lack of built-in vibration hurts it somewhat, but there's no denying that *Rez* on the Dreamcast remains an utterly compelling experience. Arguably one of the greatest contenders for those many 'Are videogames art?' discussions, *Rez* pushes boundaries and mixes gameplay, sound and vision in a way that few other titles have been able to manage. Beautifully abstract and boasting the sort of creative gameplay that matches its truly astonishing aesthetics, *Rez* is just as much an experience as it is a game and is further testament to just how innovative and imaginative Sega once was. A truly stunning game that needs to be in every Dreamcast owner's collection.


10



DREAMCAST and the rest...

While the Dreamcast boasted some excellent arcade ports, there was plenty more to Sega's machine than just the latest Sega release. It's a truly wonderful machine and it makes us sad to think that it will probably remain Sega's last console

01 JET SET RADIO
02 POWER STONE
03 COSMIC SMASH
04 VIRTUA TENNIS
05 BANGAI-O
06 CRAZY TAXI
07 F355 CHALLENGE
08 STREET FIGHTER III: 3RD STRIKE
09 GAROU: MARK OF THE WOLVES
10 RE-VOLT
11 SKIES OF ARCADIA
12 GRANDIA II
13 CHU CHU ROCKET!
14 BOMBERMAN ONLINE
15 MARVEL VS CAPCOM 2: NEW AGE OF HEROES
16 SOUL CALIBUR
17 EVIL TWIN: CYPRIEN'S CHRONICLES
18 SPACE CHANNEL 5
19 SONIC ADVENTURE 2
20 VIRTUA FIGHTER 3TB
21 ECCO THE DOLPHIN: DEFENDER OF THE FUTURE
22 REZ
23 OOGA BOOGA
24 VIRTUAL ON: ORATORIO TANGRAM
25 PROPELLER ARENA
26 TOY COMMANDER
27 SHENMUE
28 CASTLE SHIKIGAMI 2
29 COOL COOL TOON
30 STREET FIGHTER ALPHA 3
31 THE LAST BLADE 2
32 SAN FRANCISCO RUSH 2049
33 VAMPIRE CHRONICLE
34 MARS MATRIX
35 GIGA WING 2
36 POWER STONE 2
37 WORMS ARMAGEDDON
38 DEAD OR ALIVE 2
39 CANNON SPIKE
40 THE KING OF FIGHTERS: DREAM MATCH 1999
41 BORDER DOWN
42 ALIEN FRONT ONLINE
43 STUPID INVADERS
44 GUILTY GEAR X
45 PSYVARIAR 2
46 BLUE STINGER
47 JOJO'S BIZARRE ADVENTURE
48 TRIZEAL
49 FUR FIGHTERS
50 CAPCOM VS SNK
51 CHAOS FIELD
52 FIREPROWRESTLING D
53 WETRIX+
54 TRIGGERHEART EXELICA
55 IKARUGA
56 SONIC SHUFFLE
57 CONFIDENTIAL MISSION
58 THE HOUSE OF THE DEAD 2
59 SEGA BASS FISHING
60 SONIC ADVENTURE
61 FLOIGAN BROS
62 WACKY RACES
63 MORTAL KOMBAT GOLD
64 D2
65 ILLBLEED
66 PHANTASY STAR ONLINE
67 TONY HAWK'S PRO SKATER 2
68 READY 2 RUMBLE BOXING
69 EVIL DEAD: HAIL TO THE KING
70 GAUNTLET LEGENDS
71 4X4 EVOLUTION
72 AEROWINGS
73 BUST-A-MOVE 4
74 VIRTUA STRIKER 2
75 DYNAMITE COP!
76 THE TYPING OF THE DEAD
77 GRAND THEFT AUTO 2
78 SILENT SCOPE
79 HEADHUNTER
80 NFL 2K2
81 HIDDEN & DANGEROUS
82 RESIDENT EVIL 3: NEMESIS
83 NHL 2K
84 QUAKE III ARENA
85 INCOMING
86 HYDRO THUNDER
87 FIGHTING FORCE 2


05
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08 09
You think I understand you?
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Coins
After Ryudo Millenia Roan
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REPLAY
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PRESS START
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HIT BONUS
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PERFECT 10
PANNAKOTTA
77 78
JOB COMPLETE!
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86 87
8 OF 16

SCUBA DIVE

"DARLING IT'S BETTER, DOWN WHERE IT'S WETTER"



- **PUBLISHER:** DURELL SOFTWARE
- **RELEASED:** 1983
- **GENRE:** FISH-'EM-UP
- **FEATURED HARDWARE:** ZX SPECTRUM
- **EXPECT TO PAY:** £1+



HISTORY

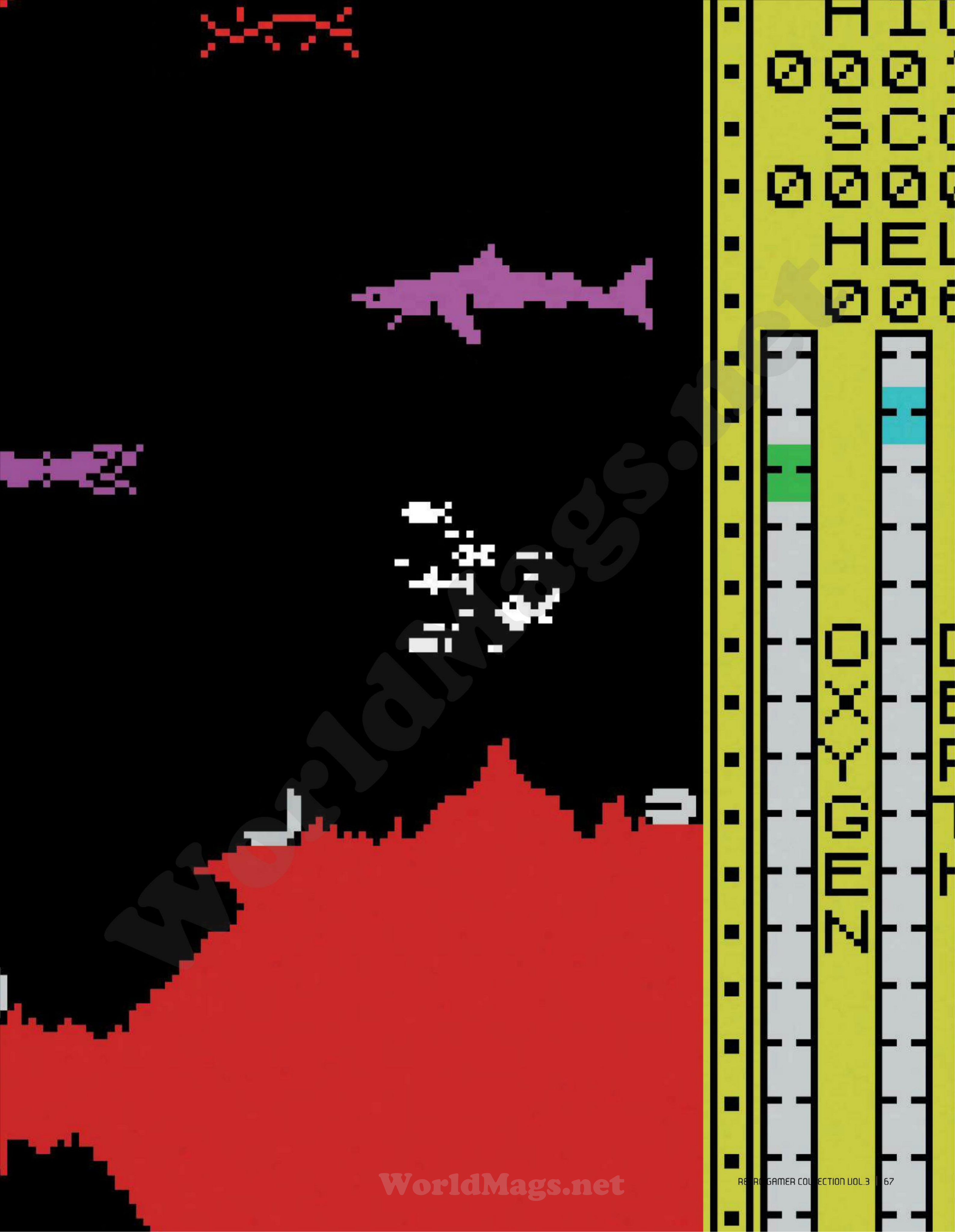
A wise old crab by the name of Sebastian once told us: "Life under the sea is better than anything they've got up there." He then burst into an impromptu song and dance and described to us a wonderful tale about life under the sea where the sturgeon and ray love to play and the ling are on the strings while the clams like to jam. Hang on a minute. That's actually Disney's *The Little Mermaid* we're thinking of.

Still, Sebastian's point remains relevant, and even if he isn't as hot as Ariel, he certainly knew what he was talking about. Mike Richardson obviously agrees, because his 8-bit creation *Scuba Dive* is a wonderful slice of aquatic action that proves that while life under the sea is undoubtedly fun if you're a mermaid or a red singing crab, it's not so great for the average pearl diver.

Diving into the inky blackness, your minuscule diver has to swim through the heavily infested waters and harvest pearls from the many clams that litter the surrounding rocks. Sharks, snakes, shoals of fish and all manner of aquatic nasties attempt to keep you from your goal, and a brush with any of them immediately results in the loss of a life. Even knocking in to too many rocks will cause you damage, so you're going to have to be really precise if you want your divers to nab those pearls and return to the awaiting boat, which occasionally moves, in one piece.

Explore far enough – while keeping an eye on your oxygen gauge – and you'll eventually discover a huge octopus that guards the gateway to deeper water and far bigger riches. A second octopus guards a huge chasm and even greater rewards, but we were far too scared to go down there and investigate on our own.

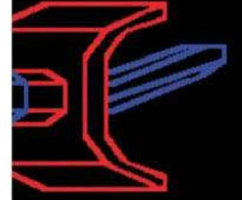
According to Sebastian, there's treasure beyond your wildest dreams and an ancient civilisation down there. But don't believe him; he's just a fictional talking crab.


OXYGEN



STAR WARS





A long time ago, but not in a galaxy far, far away, Atari created an incredible vector graphics videogame based on George Lucas's Star Wars film. Darran Jones uses the Force to track down its project leader, Mike Hally, to discover how the hit coin-op was created. Many Bothans died to bring you this information

» Barriers could be a real pig to avoid and got more numerous as the game carried on.

The *Star Wars* saga is easily one of the most famous film franchises of all time and has made its creator George Lucas a very rich and powerful man. It also happens to have had more videogame adaptations than any other film – the first, an Atari 2600 re-creation of *The Empire Strikes Back*, was released in 1982 – and, nearly 30 years later, it shows little sign of slowing down. Our focus now, though is on Atari's *Star Wars* coin-op, which remains one of the greatest videogames to ever bear the *Star Wars* name.

Impossibly slick, with booming digitised speech and an instantly recognisable sit-down cabinet – a smaller, stand-up version also existed – *Star Wars* was a thing of beauty and remains an utterly absorbing shoot-'em-up and a stunning example of how well videogames could capture the essence of a completely different medium. Amazingly, however, it didn't actually start off as a *Star Wars* videogame at all…

"The *Star Wars* game came about because I wanted to do a 3D space war game. I mean, I really wanted to do a 3D space war game," reveals Jed Margolin, *Star Wars*' main programmer and the driving force behind the classic game, on his personal website. "It's why I went to work for Atari. Even before going to Atari I had already worked out the math for 3D that did not use homogeneous co-ordinates. The use of homogeneous co-ordinates just gets in the way of understanding what is really going on in 3D."

"This is a first-person game using 3D perspective graphics."

With this simple sentence – part of Jed's far larger game idea proposal – *Warp Speed* was put forward as a potential game project at Atari. This was 14 November 1979. Effectively *Battlezone* in space, the document stated that *Warp Speed* would place the player in the cockpit of a space fighter and would pit them against a like-minded opponent – two cabinets could be linked together to achieve this – while the stars and enemy space fighter would be handled as three-dimensional projected figures. The computer opponent would self-adjust to the player's skill level and games would be time-based, with the player winning bonus time depending on how well they played. There was even a suggestion to tie it in with a possible space movie, or *Star Wars II* as Jed called what would eventually become *The Empire Strikes Back*.

Warp Speed was given the green light and Jed began to assemble his team. Greg Rivera was on programming duties, while Ed Rotberg would step in as the game's project leader. But then disaster struck. "Ed, along with Howard Delman, left the company and started their own company, Vidia, which was later bought by Nolan Bushnell and folded into Sente. Greg and I needed a project leader and selected Mike Hally. Usually, the project leader selects the team, but in this case the team selected the project leader." After an initial stall, *Warp Speed* was back on.

"Jed was a truly terrific hardware engineer for Atari and had been working on a higher-powered vector graphics hardware since Atari had had some success with games such as *Asteroids, Lunar Lander* and *Gravitar*," recalls Mike about his early recollections of working on the game.

"As I remember, I had finished *Gravitar* with Rich Adam and was working on some new game concepts when someone in the licensing/marketing department approached the engineering group to find out if the new hardware Jed Margolin was working on was capable of doing a *Star Wars* game."

Mike was soon hard at work creating storyboards with Dave Ralston, which would not only describe the style and flow of the game, but would be used by Atari to potentially pitch *Warp Speed* to the newly formed LucasGames. After a few internal meetings, Mike was ready to pitch the *Star Wars* game design to the licensing group at LucasGames.

"I remember the meeting going very well, and sometime shortly after this meeting I was informed that we had a licence agreement with Lucas to do the coin-operated *Star Wars* project," recalls a clearly pleased Mike. "I was very excited to be a part of this experience with Atari and to be rubbing shoulders with the likes of George Lucas. As far as Jed picking me to be the project leader, I really do not remember how much control he had in this decision, but I'm pretty sure he did have some major input in the final decision."

Warp Speed officially turned into the *Star Wars* project in January 1982, a good 26 months after Jed first pitched his idea. With the game ready to go, Mike and Jed quickly assembled the rest of the team who would take part in *Star Wars*' gruelling 18-month schedule. Earl Vickers took on the

What's in a name?

Back in the early days of videogaming, Atari was notorious for not crediting the authors of its games. The arcade release of *Star Wars* was no different, so Mike and the rest of the team hatched a cunning plan to ensure that their hard work wouldn't go unnoticed.

Whenever you make the final approach to the Death Star, the huge space station has either 'May the Force be with you', or the names of the team displayed on its side.

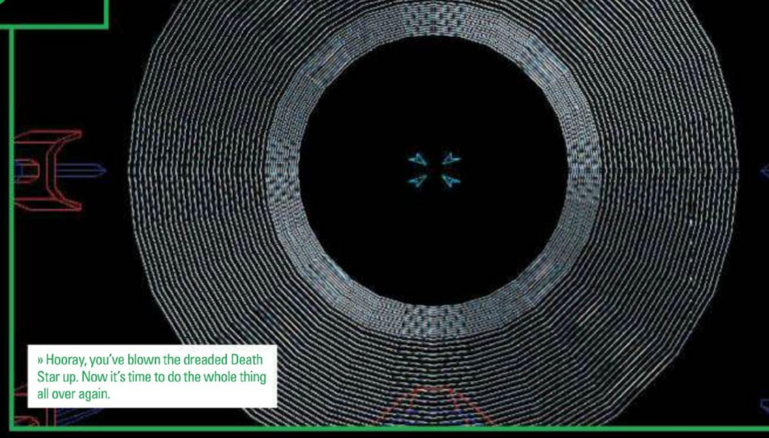
"There is a control on the monitor that allows all the lines to become visible so that the operator can make adjustments," reveals Mike about his ingenious idea. "These lines were not meant to be seen. Atari used to be afraid to publish the names of the developers in fear that other companies would steal their talent.

"Normally on the Death Star, as it zooms in, you just see what looks like random dots or lights. However, with a tweak of the monitor you can see the interconnecting lines. If my memory serves me right, Atari management did not know about this until sometime after production was well under way. I also believe that after this the game teams could add in the attract mode, a credit screen listing names and positions of team members like movies did. You need to give 'credit' where credit is due as they say!"



THE MAKING OF… STAR WARS





» Hooray, you've blown the dreaded Death Star up. Now it's time to do the whole thing all over again.

duties of audio engineer; Eric Durfey was on board as technician, while Norm Avellar was eventually roped in to assist Greg Rivera on programming duties. According to Jed, the team went through several technicians before they eventually arrived at Eric because "previous techs didn't want to spend their time on a game that was a guaranteed loser". While the tiny team no doubt seems ludicrous in today's climate of huge budgets and large work teams, Mike feels that it was the perfect recipe for success.

"It was really easy to communicate ideas and issues with each other because we were all located in the same lab area," he explains. "We became a family, as such, as we spent so much time with one another at work. We had our moments of fighting, arguing, laughing and our moods went through many highs and lows. Greg and I were the only team members married at the time and we both had small children at home. Everyone on this team was very good at their skill so there was a lot of mutual respect for each other. We all believed in this project so it made it fun to come to work each day and see the progress the game was making. With each step, the rest of the company started to believe in us and saw the potential the product would have."

It may have all come good in the end, but a hell of a lot of hard work had to be crammed into those 18 long months. It was even trickier for Mike, as the eventual success of the finished game meant that he was still working on it long after it came off the final production run. Unsurprisingly, with such a long gestation period and small team, the path from home-grown idea to mega-hit arcade game wasn't without its fair share of problems…

"This was the most intense project that I had ever been involved in, let alone being the project leader and game designer," recalls Mike. "Every single day was a battle of issues involving every department associated with *Star Wars*' development. From a team perspective, we were up against shared company resources, along with trying to create the impossible. New technology, a game worthy of the *Star Wars* name and a product that would out-earn any other game of the time were just some of the daily pressures we faced. And let's not forget the creation of a brand new controller, voice and music to the mix? Then, of course, there was the added pressure of creating a production-line product with a deadline that just about made us all go insane. Dealing with the licensing group just added another layer of complexity and complicated getting our work accomplished. *Star Wars* was also released in multiple cabinet configurations and was produced in two different production facilities to add to the overall difficulties. UL and FCC approved? The list goes on and on… and let's not forget the most important issue of all: this game needs to be fun for every type of gamer out there, whether casual or hardcore."

"WE BECAME A FAMILY, AS WE SPENT SO MUCH TIME WITH ONE ANOTHER AT WORK" MIKE ON HIS DEV TEAM

Of course, the blessing and curse of being able to create a *Star Wars* game was having access to that actual licence, for while it potentially meant that the game would receive a crucial head start in the arcades, it would also mean that the project would be constantly under the steely eye of George Lucas.

"From the initial meeting with the licensing group to all the follow-up meetings with the games department group, there was one consistent theme that the Lucasfilm groups had: they were all very protective of the *Star Wars* universe and every detail had to be accurate," continues Mike. "If I had any element that was not accurate, they instantly made me aware and it had to be changed. Since they were also involved in game development, they did understand some of the decisions that I made."

The team was given a tremendous amount of resources to draw upon and had access to virtually every aspect of the film. They were sent a copy of the original script, numerous toys from which to draw inspiration and plenty of original sketches that pretty much covered every element of the movie. All the music was available for reference – as were numerous voice scripts – and the only caveat was that every little detail had to be fed back to the protective publisher.

"The process used to keep them [Lucasfilm] in the loop was to invite them down to Atari to view game development until we had a system that we located on their premises," begins Mike, about the gruelling process. "I would take new ROMs up to Lucasfilm and replace them in the hardware along with a list of new features this version of the program contained. I would always give a demo of the current game

Making the cut

It's rare when all the ideas during the development process make it into the final game, and *Star Wars* was no exception. While Mike is more than happy with the end product, a number of ideas never actually made it into the final game. Initially it was going to be possible to have two machines linked up – a throwback to Jed's original *Warp Speed* pitch – but it never happened. While the idea was going to be finally implemented in the sequel, it never came to be. Perhaps the biggest change that never appeared in the final release was the idea of a timer that would appear in the form of diminishing fuel. Blowing up the Death Star would result in you being rewarded with a completely new fuel bar, while failing to hit the exhaust port would simply see you carrying on the next stage with whatever fuel you had left. It's certainly a bold concept and is a great way of ensuring that one person doesn't completely dominate your machine, but we're glad that it went the other way.



» You'll never forget the first time *Star Wars*' huge towers loom up in front of you… or how hard it is to dodge the damn things!

He's Got Game

Mike Hally had quite an illustrious time at Atari's coin-op division, as the following games prove



APB (ALL POINTS BULLETIN)

Released: 1987 Role: MLH

Great little game that sees you playing a cop who must pull over various law breakers within a set time limit. Its go-anywhere gameplay could be seen as an early blueprint for the *Grand Theft Auto* franchise.



AREA 51

Released: 1995 Role: Game Design

Fairly bland, by-the-numbers lightgun game that tries desperately hard to emulate the success that Sega had with the genre but fails miserably. There are some cool aliens to destroy, but this is pretty generic stuff.



BLASTEROIDS

Released: 1987 Role: MLH

Atari's fourth game in the *Asteroids* series offered a huge boss to fight, plenty of different power-ups and an enjoyable two-player mode. A solid shooter that's only let down by its muddy-looking visuals.



GUARDIANS OF THE 'HOOD

Released: 1992

Role: Digitised actor (Hawker)



FIREFOX

Released: 1983 Role: Project Leader

This LaserDisc release was based on the 1982 Clint Eastwood film, which in turn was based on Craig Thomas's 1978 thriller. Taking on the role of Eastwood's character, it features several sequences from the film.



GAUNTLET DARK LEGACY

Released: 1999

Role: Producer/Game Design

This sequel to *Gauntlet Legends* offers several additions, such as the ability to make slow and fast attacks, as well as four new characters: Sorceress, Knight, Dwarf and Jester.



GAUNTLET LEGENDS

Released: 1998 Role: Producer

Unlike many games of the time, this fun update of the classic franchise enabled players to use passwords so characters could be saved. It was also the first time you could level up in the franchise.



GRAVITAR

Released: 1982 Role: Designer

Great little shooter that had impressive visuals and varied gameplay that paved the way for the likes of *Oids* and *Thrust*. Yes, it can be extremely hard at times, but perseverance reaps its own rewards.



AKKA ARRH

Released: 1982

Role: Designer/Programmer

Early release that isn't currently emulated in MAME, so you're going to have a tricky time playing it unless you own an original cab. It was originally known as *Target Outpost*.



INDIANA JONES AND THE TEMPLE OF DOOM

Released: 1985 Role: Producer

Fun take on the film that has Indy whipping snakes and Thuggee guards, swinging over chasms with his whip and recovering the Sankara stones. The highlight is easily the mine chase.



ROAD RUNNER

Released: 1985 Role: Director

It's a great use of the *Road Runner* licence, but certain sections are so difficult that all the 'meep meeps' and cute animations in the world won't stop you from wanting to put your head through the monitor's screen.



S.T.U.N. RUNNER

Released: 1989 Role: Overlord

An excellent, fast-paced futuristic racer that combines impossibly slick visuals with fast-paced action to create an exhilarating experience that will still leave you breathless with excitement.



THE EMPIRE STRIKES BACK

Released: 1985

Role: Product Manager

This sequel to *Star Wars* does push the technology – there's lots happening on screen – but it's not quite as fun to play. A worthy sequel, but not as spectacular as the game that spawned it.

THE MAKING OF...

STAR WARS

design and discuss what would be coming next. They had to approve all game text, copyright information, cabinet artwork, operator manual and so on. Just think of all the money this company has made on licensing books, games and toys. My last memory of working with Lucasfilm on this project was driving the Atari truck to the ranch to drop off a production sit-down cabinet, which was part of the licensing agreement. It was a great feeling knowing that we had accomplished so much and everyone was really pleased with the final outcome."

Although Mike has fond memories of Lucasfilm, he'll be the first to admit that working with a company that had such a fastidious attention to detail meant that sometimes they weren't always on the same wavelength. A typical example is a memo posted on Jed's website, which shows a list of small and seemingly petty changes that Lucasfilm was adamant on having corrected. One note insisted that shields were made of energy, not metal, as pilots wouldn't be able to fight if a sheet of metal obstructed their view whenever they were fired upon, while no 'gunner exists in an X-Wing because it is piloted by a single person with the help of an R2 unit'. The best, however, was a chastising for using the term 'parcels' instead of 'parsecs', which was then followed by a long explanation saying that even this wouldn't be the appropriate term as even a single parsec would be 3.26 light years and the Death Star wouldn't be visible at that range. With no Earth term being suitable, it was suggested that 'light tics' should be used instead. Fortunately, Mike always took these requests in good humour.

» Watching the tower stages morph into the Death Star's trench remains one of the game's most thrilling moments.

"I remember laughing to myself because they were overly consumed with these little tiny issues and we had been worried about some other much bigger issues," Mike recalls about that particular memo. "The team was really relieved to hear back from Lucas and we were glad that their main points were so minor."

While Lucasfilm proved to be far more receptive than the team had originally imagined, Mike and the rest of the crew nevertheless found themselves constantly under pressure due to the sheer amount of interest that the potentially lucrative licence was constantly generating.

"Oh, it never stopped," continues Mike. "There were two main areas of extreme pressure: one was from the company and their need for this game to get finished and be a huge success, while the other was internal pressure from within the team to be a part of something special and make a name for ourselves. I think every development team at Atari was under a lot of pressure to perform and create magic, but the *Star Wars* coin-op was a new and different venture for us so it just magnified the expectations everyone had. Everyone on the team cracked at one point or another during the development but we all stood the test of time. We eventually went on to work on many other games together so I would have to say that as a team we overcame the fear of pressure and learned to actually enjoy it."

"EVERYONE ON THE TEAM CRACKED AT ONE POINT DURING DEVELOPMENT"
MIKE ON PRESSURES FACED BY THE TEAM

When you consider how popular *Star Wars* now is, it's difficult to imagine how the eventual coin-op could have ever been seen as anything less than a huge hit. However, when you look at the type of games that were available at the time, the fact that it was released in what would become one of the most trying times for the industry (the great videogame crash) and the technology that Atari was striving to perfect, it's no real surprise that it wasn't always plain sailing. While this wasn't the first vector graphics game that Atari had worked on, it was going to have to be sufficiently more fast-paced than the rather sedate speed of *Battlezone* if it was to capture the exhilarating excitement of the film's final battle. Luckily, this is where Jed's efficiency became readily apparent and the talented programmer ended up making the visuals a little too spectacular.

"Originally, the 3D math that *Star Wars* was capable of performing allowed any object and the observer to be in any orientation," confirms Jed. "However, it was eventually decided that players might be confused by being approached by an upside-down TIE fighter, so they were forced to be right-side-up most of the time."



» Our very own *Star Wars* arcade cab. Darran currently has the high score… Honest.



"We ended up going with vector graphics because Atari felt that they were best suited to *Star Wars*' development and what it required based on the original game designs," continues Mike. "It was one of the first three-dimensional games and at the time it was the only display that we had access to that had a chance of pulling off what we wanted to achieve. At this time in the evolution of videogames almost every coin-operated game had its own custom hardware to maximise the needs for the specific requirements of the game."

Despite the difficulties of using vectors and specific custom ROMs, all of the hard work eventually paid off in rather spectacular style. Few gamers will forget the first time that they saw a whole squadron of TIE fighters roar past them, or how they sat entranced as they watched the towers they were blasting at spin crazily around until the Death Star's ominous-looking trench was formed. Massive fireballs exploded in front of your very eyes, Vader's TIE would swoop ominously around the screen, impervious to your firepower, while later runs through that dangerous trench had you dodging numerous barriers that speed towards you at ever-quickening speeds. The simplistic-looking, but oh so striking, vectors created a beautifully immersive atmosphere that was further enhanced by the carefully picked snatches of music and speech that played throughout your assault.

"The Force will be with you, always," "Yahoo", "Use the Force" and "You're all clear, kid" were just a small number of the classic lines that greeted your ears, and the experience was only heightened by John Williams' wonderfully rousing – if shortly looped – score. For many, though, it was the beautifully crafted sit-down cockpit and cabinet that helped to give off that true *Star Wars* experience. And amazingly, it almost didn't happen.

The cabinet was initially equipped with a joystick, but early testing revealed that it confused

THE FORCE IS STRONG WITH THESE ONES…

The numerous conversions of Star Wars



SPECTRUM
While the majority of 8-bit home conversions are fairly respectable, even the most hardcore Speccy fan will admit that this port isn't without a few issues. Yes, it's very accurate and sports some nicely drawn visuals, but the sluggish pace and lack of sound in-game does dampen the overall experience somewhat. It's certainly a fun game, but it's a shame it's not a little faster.



AMSTRAD
Considering our Amstrad background, it's somewhat difficult to champion the machine without being called biased. Nevertheless we're staunch defenders of the Amstrad port, even if it does lose out ever so slightly to the far nippier Commodore 64 version. A solid and enjoyable conversion.



COMMODORE 64 (DOMARK VERSION)
The graphics are horrifically chunky, but there's no denying that this is otherwise a decent port of the classic arcade hit. Boasting a great rendition of the theme tune and solid in-game spot effects, this is great stuff and well worth a quick blast. A slightly iffier version exists in the US and was created by Parker Bros, not Domark.



AMIGA
Many purists will argue that this is actually superior to the original arcade game, and it's very easy to see their point. Mouse control gives you amazing accuracy over your crosshairs; the graphics are extremely faithful to the 1983 coin-op, while the addition of extra sound chips is the icing on a very pretty cake.



ATARI 2600
We've seen some 2600 games suffer from dreadful flicker, but this Parker effort – ironically Atari didn't have the actual rights to produce its own home version of its own coin-op – is truly atrocious. A real pity, as the actual gameplay is pretty good. It's just a shame you can't play it without getting a killer headache.



ATARI ST
While it's extremely similar to the Amiga version, Commodore's machine just clinches it thanks to slightly clearer speech – there were more samples on offer as well – and sound and far smoother, slicker visuals. It's still a strong conversion of the classic game, though, and a must-have for Atari ST owners.



ATARI 5200
Although it boasts some decent visuals, it's very hard to recommend this 5200 effort, mainly because of the truly horrific collision detection that rears its head throughout the game. It's incredibly frustrating to watch TIE fighters not get blown apart by your perfectly placed hits, and the clunky controls are the final straw.



COLECOVISION
This is so much better than the 2600 and 5200 ports that it's not funny. Boasting far superior visuals, little flicker and solid controls, this is easily one of the better conversions that's available on the earlier systems. Yet another ColecoVision game that was better than its Atari 2600 counterpart and a stunning conversion in its own right.



ATARI 8-BIT
Although there's a fair amount of flickering on display – although nowhere near as bad as the 2600 version – this is a surprisingly good conversion and nips along at an incredibly fast pace. In fact, after some extensive play it's probably become our favourite 8-bit version of the game, even beating the mighty C64 effort.



DOS
Its limited colour palette means that it's unable to match the sheer vibrancy of the Amiga and ST versions and the sound is rather disappointing, but this is otherwise a fairly solid conversion. It plays at a decent pace and has great control due to utilising the mouse. It's a bugger to run in DOSBox, though, so be prepared for a lot of fiddling around.



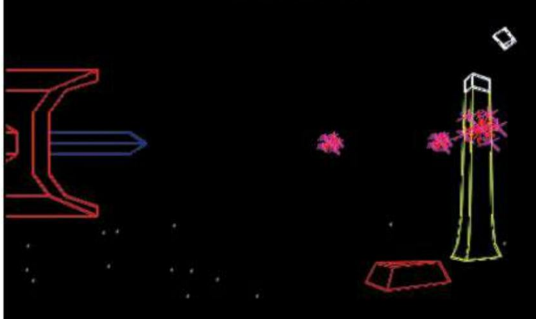
BBC MICRO
We were pleasantly surprised by the BBC Micro version of *Star Wars*, as it's actually pretty darn slick. Faster than many of the other 8-bit versions, with visuals that are somewhere between the Commodore 64 and Amstrad outings, it's a surprisingly faithful conversion that should be in any BBC owner's collection.



ACORN ELECTRON
Like far too many Electron titles, this game plays like a slightly senile relative of the BBC Micro version. It's comparatively sluggish and sadly monochrome, making it very difficult to target the fireballs, but generally it's as faithful as Electron owners could realistically expect from the underpowered machine.



APPLE MAC
With its razor-sharp graphics, scratchy samples and mouse-driven controls, Domark's Mac conversion is pretty faithful to the arcade original, albeit in monochrome form. It offers a surprisingly tough game, though, so only Jedis need to apply here, as anyone else is going to have a mighty struggle on their hands.







» Skilled players would shoot the tops off towers in order to earn more points. It's fairly tricky to do but well worth achieving.

people, as they didn't know which way to move it. Still, those early test periods proved crucial as it allowed Mike and the rest of the team to secure extra money for a far more suitable controller.

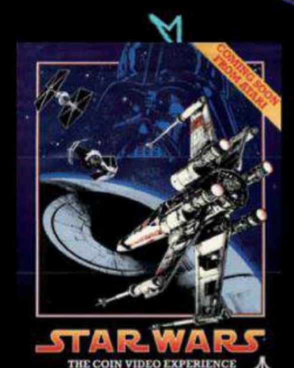
"The control yoke for *Star Wars* was a downsized version of the control from *Army Battlezone* minus the palm switches, which came directly from an actual Bradley Fighting Vehicle – it was the gunner's control," explains Jed about the unusual controller's original origins. "I wanted it to be based on every child's experience with riding a bike," continues Mike. "It was all about putting both your hands on the handles and pressing the triggers. Everyone immediately knows what to do and no one ever forgets. It was the perfect player input to play the game and really feel in total control of what you were attempting to do."

Although the device helped give the finished game that final touch, it was far from perfect as Jed reveals, which explains why the centring for the control yoke isn't always perfect. "*Star Wars* originally used a Pokey to read the pots," he reveals. "At that time, people either made their own A/D converter with a counter, a comparator, and a ramp, or they used Pokey. The Pokey was a full custom IC designed for the Atari 800/400 to read pots and keys, which gave it its name, 'POTs' and 'KEYs'. Unfortunately, Pokey does a really awful job of reading pots; it is guaranteed to produce occasional wrong values. The software to deal with it is pretty nasty. After Greg Rivera brought this to my attention I took the daring step of actually putting in a real A/D, the ADC-0809. Unfortunately, many people continued to use the original code to treat the A/D values as though they had come from a Pokey. Like Greg. That is why the controller in *Star Wars* keeps getting re-centred, usually badly."

It wasn't just the software that proved to be an issue, as creating the actual hardware wasn't without its issues either. "The device was a major undertaking for the mechanical engineering department," explains Mike. "I had started at Atari as a mechanical engineer in the Pinball Division, so I knew exactly what I wanted and how it could be constructed. The entire project to get this controller into production was crazy. I remember there was a flood in the town where the moulds for the handle grips were being made, so we had to take a rowboat from one building to another to try to get some prototype handles ready for our initial field test."

Indeed, it was field tests that often proved to be essential for the success of many early arcade games, and Atari was particularly adept at responding to the constructive feedback that was given at these focus groups.

"We had our very first focus group on 24 January 1983," explains Mike about the important event. "The actual gameplay on offer was very rough, as the tower and trench phases were just in the beginning stages of development. Overall, though, the players thought the game had great potential and liked the idea of having voices and music playing from the movie. They also thought that a sit-



» Atari kept interest in *Star Wars* high by systematically releasing early, tantalising flyers.

Light side, Dark side

After working on such a huge project like *Star Wars*, we were keen to know Mike's favourite and worst moments about working on the classic arcade game.

"One of my biggest thrills was my trip back to New York where I did radio and television spots with our marketing department," Mike recalls. "It was kind of like being a rock star. I was on a television show and got to show off *Star Wars* in a sit-down cabinet that the whole world saw. It was exciting and a very new world for me to be a part of. Receiving my first six-figure bonus cheque at the age of 28 was also a moment that I will never forget. I still remember my body trembling when I opened up the envelope and saw that big number."

But what about the worst moment, Mike?

"That's easily the toughest question you've asked me," he begins. "There were definitely many times that I was so tired and fed up with everything that I just wanted to either die or quit, but then something good would always happen. If I'm honest, I can't really remember any one horrific moment. It's funny how things change when you have success, as all you can ever remember are the good times."

down version of the game would help add realism to the experience."

Responding to the aforementioned issues with the original joystick and the need for a bigger cabinet, work on *Star Wars* continued and Mike began to tally up the final costs for creating the behemoth cabinet. Total material costs came to an expensive $1,249. A large amount of money for the time, but a positively insane amount of cash when you realise that Atari's game was actually going to be released in one of the industry's most turbulent times. Were Mike and the team not worried about creating such an expensive product during the videogame crash?

"Now that you ask the question it does scare me," continues Mike, "although it was not my job to make sure that the company was financially solvent. Atari had other divisions but I was not sure how the company as a whole was doing then. From my perspective, the company shelled out $1 million for the licence and I never feared for my job so I just felt everything was in fine shape. I was so busy with trying to make this game a success; I was blinded as to the decline in videogame sales for the year. I do remember feeling bad for our workers in the production building, though. If we did not have product for them to build then they did not have a job for a while. I felt somewhat responsible for making sure I did what I could during my career to keep the factory running at all costs."

Despite being released during one of videogaming's bleakest times, *Star Wars* was an immediate success and instantly became the number one selling arcade game, although sadly, this success was short-lived due to *Dragon's Lair* getting released two weeks later. Nevertheless, all the hard work, effort and cost was worth it, with over 15,000 machines being sold for a grand total of $15 million – not bad at all for a period that Jed and the rest of Atari described as "going supernova". Indeed, Jed is adamant that *Star Wars*' success was the main reason why the arcade division wasn't shut down that year, and it wasn't until the end of 1983 that the team discovered that Atari Games had barely broken even, and that had included the $15 million generated by *Star Wars*.

After proving to be such a huge hit in the arcades it was hardly surprising when Domark announced that it would be bringing the game to home computers in 1987. Despite a four-year wait, and fairly inferior hardware, the 8-bit machines of the time did a pretty good job of capturing the spirit of the arcade original, and while the Amiga and Atari ST versions were easily the most impressive, special mention must also go to the rather excellent home port that appeared on the ColecoVision. While the home versions sold very well, Mike and the rest of the team had no involvement with them and even less time to actually play them.

"The thing about being a part of a game development team is that once you finish one game, you just roll right into the next one," explains Mike. "In the case of *Star Wars*, Atari did a great job in licensing our game to many different home game platforms, and if I'm honest I remember getting royalty cheques from them more than remembering which company did what kind of job with our finished game. Atari would always give me a certain number of copies of these games, though, to give out to team members, which I thought was a class move and a nice motivator."

Although it was followed by two sequels – one with vectors, the later with sprites, which actually came out between the two vector games – neither of them ignite quite the same feelings as their superior predecessor, and it's a testament to the game's brilliance and success that it's the only arcade machine we actually happen to have in the office. *Star Wars*, perhaps more than any other licence of the era, was able to offer you an immersion and atmosphere that was second to none, and it's the feeling of actually being within the film that, to us, makes it so special.

"*Star Wars* captured the essence of one of the greatest properties ever created for the big screen and beyond," agrees Mike. "It allowed someone to become Luke Skywalker and play an interactive role, just like what people viewed on the big screen. It had just the right mix of all the elements it takes to make a winner… For me, it's a true timeless piece of history and art."

"IT HAD THE RIGHT MIX OF ALL THE ELEMENTS IT TAKES TO MAKE A WINNER"
MIKE ON WHY STAR WARS WAS A SUCCESS



» TIE fighters soon start coming thick and fast and launch an insane number of fireballs at you.



DEVELOPER LOOKBACK

AFTER A QUARTER OF A CENTURY OF UNPARALLELED SUCCESS, EA HAS COME FULL CIRCLE. WHILE THE GLOBAL GIANT CONCENTRATES ITS ENERGIES INTO A FOUR-PRONGED REBRAND, MIKE TOOLEY TAKES A LOOK BACK AT THE COMPANY THAT BLAZED THROUGH THE EIGHTIES, REDEFINED GAMING IN THE NINETIES, AND MADE MOVIE LICENCES A WORTHWHILE ENDEAVOUR RIGHT UP TO THE PRESENT DAY

Electronic Arts (PART 1 OF 3)

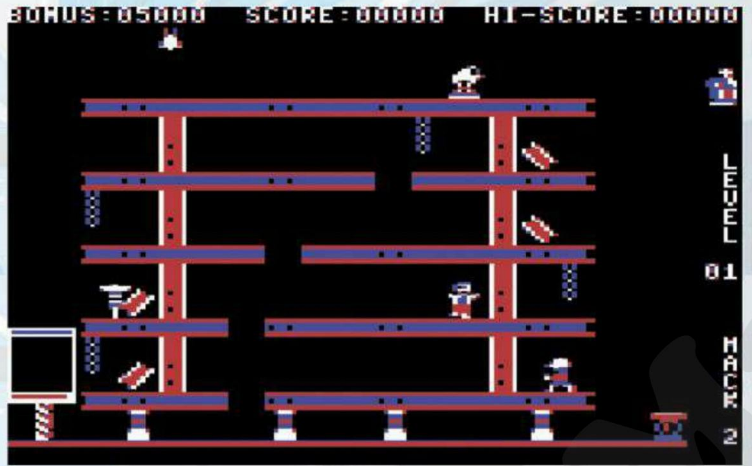
Glance at any gaming or retro gaming forum and you'd be hard pushed to find even the merest mention of Electronic Arts. Get past the casual consumer and you'll find an apathy for EA that is equal to the love that Nintendo embraces. A good analogy for this would be *The Life Of Brian*'s, "What have the Romans ever done for us?" Now replace Romans with Electronic Arts and answer honestly. Try to imagine gaming without EA. It would be a travesty. EA is more important to gaming than Nintendo, Sega, Sony and Microsoft, because if it wasn't there, nobody else would be, at least not on the same scale. Electronic Art's reach is as expansive as it is veiled; its grasp of present and future-generation technologies is unrivalled and at its heart beats the greatest game development roster in the world.

EA was the realisation of a seven-year ideal held by its founder Trip Hawkins. Trip demonstrates this ideal when he tells us: "I grew up in the golden age of TV. From the moment I saw my first computer in 1972, I knew I wanted to make videogames. I loved to play and had a strong feeling that it was good for me and that people were meant to interact, not sit passively in front of the 'boob tube'. I was already designing board games, but saw that a computer would allow me to put 'real life in a box,' a phrase which was oft repeated by the press in the early EA days."

He continues: "In 1975 I learned that the first retail store dedicated to



Everyone should play *Archon*, a combination of chess and a *Dungeons & Dragons*-type RPG.



Electronic Arts does the platforming thing with *Hard Hat Mack*.

EA INSTANT EXPERT

ELECTRONIC ARTS™

Electronic Arts was first founded in 1982 and was originally called Amazin Games.

Dr J and Larry Bird Go One On One was the first time celebrities were licensed to appear in games.

Electronic Art's first million-selling title wasn't actually a game at all, but Will Harvey's superb *Music Construction Set*.

EA turned off supply to Centresoft in 1987, meaning Boots couldn't stock its games. As EA took over more and more companies the ailing chemist would leave the games market altogether.

EA refuted the value of budget software in the Eighties. Trip Hawkings predicated at the PCW in 1987 that Firebird, Codemasters and Mastertronic would all move over to full price software or cease to be.

EA replaced Accolade as the number one software producer in US within 18 months of being founded. US Gold had no interest in EA games when Trip approached them, so the deal went to Ariolasoft for European distribution.

***Time* magazine ran** a feature on Electronic Arts in 1986. It not only focused on its packaging but also on the way that developers were treated like rock stars.

1989 is the only year that a new *John Madden* game hasn't been released. Instead 1988's version was brought up to date and repackaged for the console market.

EA signed a long term *Lord Of The Rings* licensing deal back in 1988. The games it made under licence impressed Tolkein's descendants so much that when the lucrative licences needed renewing after the movies were made, EA was a cert to receive it.

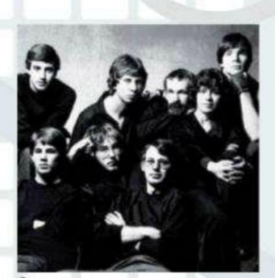
EA was the first games company to install game producers and give credit to games authors. Their early business model emulated Chaplin's United Artists so closely that it was almost called Electronic Artists.

computers had opened and that Intel was going to put a computer on a chip. I decided that I should start my own videogame software company in 1982. By then, I figured, there would be enough hardware in homes to support a game software company. But I had some things I needed to do first: finish school, learn how to make computer software, learn how to run a business, and help sell some hardware into homes so that my software could have some customers." For many, such precociousness is left behind as childhood dreams find themselves juxtaposed to harsh realities of teenage years, but Trip fashioned a journey through life that would see him realise his goals. "In the intervening seven years, I customised my Harvard studies and graduated magna cum laude with the first 'videogame' degree," he explains. "Formally it was called a degree in Strategy and Applied Game Theory. But I was programming videogames. One of my first was a 1973 football simulation written in BASIC for a PDP-11 mini-computer with time-sharing video displays, foreshadowing *Madden* and EA Sports. I then got an MBA at Stanford while writing the first major market research study of the Personal Computer, attending the first West Coast Computer Faire, and also doing research for Fairchild on the Channel F, the first console. I went to work at Apple in 1978 and helped grow the company from $2 million in revenue to $1 billion and from 50 employees to 4,000 in four years."

So it would have come as little surprise to those that knew him when Trip resigned from Apple and his post as director of product marketing to gamble everything on his beliefs. "On 1 January 1982, I resigned from Apple because I wanted to stay on the schedule I'd conceived seven years earlier," says Trip. "I felt late, because of the success of Atari's early hardware and a cottage industry of Apple II software companies, I counted 135 already making videogames. But I had a unique vision and thought I could become one of the leaders. This is what happens after you hang around with Steve Jobs for a few years!"

So it was, that on 28 May 1982 Amazin' Games was incorporated. Trip's odyssey wouldn't be a solo venture either, as Rich Melmon would join in August 1982, and was quickly followed by Dave Evans and Pat Marriott, who had left Apple, such was their belief in Trip. Trip would later refer to them as 'producers', the first time that gaming had recognised development processes. By November the head count had swollen further, and with the eventual arrival of Tim Mott, Bing Gordon, David Maynard and Steve Hayes bolstering an already forward-thinking and talented workforce, everything was in place for a stellar launch. Many of the new intakes weren't happy with the name, and so committee selected a new name. After much debate, Electronic Arts was settled on. The team viewed games as art and felt that this encapsulated all they were about. Electronic Arts was to be to videogames everything that United Artists was to movies, the original business plan was to aim squarely at getting games straight to market through direct selling, bringing together small independent programmers and gaining them mass exposure under one brand. Let the artist be known for their work was the mantra.

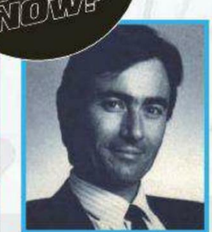
The fledgling EA scoured the States looking for the best-unsigned games, in the same way that an AR executive might court a new rock act. "I remember sweating profusely in the heat with Anne Westfall at Jon Freeman's – who were the first to sign for EA as Freefall Associates – house in summer 1982, and hooking up with Dan Bunten from Arkansas, and sitting on



The EA motley crew completely redesigned gaming in the Eighties.

DEVELOPER LOOKBACK

WHERE ARE THEY NOW?



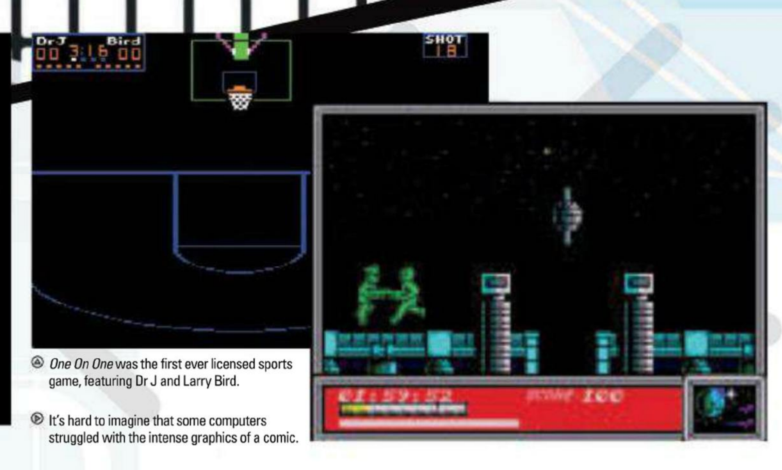
Trip Hawkins

Outspoken and slightly egocentric, there is just no denying that Trip Hawkins is a genius. In a remarkable interview with *Crash* in 1986 he described a future for gaming that was almost impossible to imagine. The fact that everything he said has happened since just illustrates the understanding that he has for the gaming industry. (You can read the interview at **www.crashonline.org.uk/46/pcw_ea.htm**)

When the director of product marketing leaves Apple for a start-up, and then sees his new start-up turn in over a million dollars per annum, you may be forgiven for thinking that would be it.

But from EA Trip moved on to 3DO, describing this as "a gradual accident. I intended 3DO to be a sister company and to remain involved with both, but they evolved on separate arcs and I felt obligated to keep 3DO alive. By the time it became necessary to split, of course it was difficult, like choosing between a healthy teenage son and a baby that was in surgery." He would remain at 3DO until the company finally filed for bankruptcy in 2003. Since then Trip has formed a new company called Digital Chocolate, when asked to compare his new venture with his old, he tells us: "I've been far more successful as an international business with Digital Chocolate. Digital Chocolate even does something I never thought possible at EA – we make the highest quality mobile games but we do a lot of the work in places like Finland and India." And for Trip, who recently celebrated Digital Chocolate's 3,000,000th download, the future is clear, "The mobile phone has turned into 'The Social Computer'. Mobile phones are becoming ubiquitous computers that keep people connected to their virtual villages. I founded Digital Chocolate to help people get more out of their social lives and mobile lifestyles using these computer networks." The future's bright, the future's…

Demon Stalkers was very similar to *Gauntlet*, but *Gauntlet* never played this badly.



One On One was the first ever licensed sports game, featuring Dr J and Larry Bird.

It's hard to imagine that some computers struggled with the intense graphics of a comic.

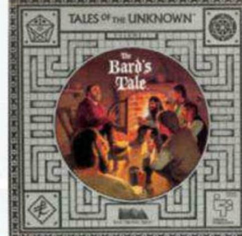
my balcony in Portola Valley trying to convince Bill Budge to join," remembers Trip. "Finally, I literally had to beg him, telling him that without him on board there was no point in my starting the company and that it couldn't make it without him. I trained my producers and sent them out to get more product action. As an example, one of them said they'd heard the name of a great game developer in Illinois but had no idea how to find him. I simply told them to find out all of the area codes for the State and to call every directory assistance number for every area code and to call every guy with that name. And it worked."

Away from the sourcing of products and hard-nosed selling to retailers, Tim Mott led a team that built Artist Work Stations (AWS). Trip's vision was that recording artists got to have a recording studio and instruments, so Electronic Arts should create similar leverage to make the best games with the best production values. In that process, it already had the staff with the right skills and ideas, so it set about developing game design tools to aid the fledgling community, allowing designers to make their ideas flesh. First seen commercially in Cut & Paste, a simple word processor designed by Tim Mott, and Financial Cookbook, a consumer finance tool designed by Trip, EA had already set itself apart from the other games companies of the day. Dan Silva joined soon after and created a paint box program for EA's growing ensemble of artists. The tool proved to be so user friendly and comprehensive that Tim sold Trip on the commercial viability of his idea, and the product eventually went to retail as Deluxe Paint. Deluxe Paint would go on to become one of the Eighties most successful creative tools, evolving into a series, it would become the standard computer art tool for a generation.

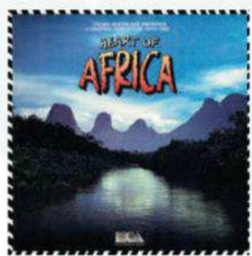
The similarity to the music industry didn't end there. Each game would come in the form of an album; gatefolded, it would open out displaying a full credits listing, a biography of the artists that had created the game and a full-colour instruction manual. Each release would be backed up by an advertising campaign that consisted of lavishly produced magazine advertisements, featuring staff photos taken by a rock album cover photographer over the course of an all-day photoshoot. Under the guidance of art director Nancy L Fong, EA would stand out from the crowd from the beginning, so much so that in June 1983 *Time* magazine would run a feature on the way EA was reshaping the gaming landscape. All this coverage and the games had only just started to arrive, but what games they were.

First out of the EA stable were Michael Abbot and Matthew Alexander's *Hard Hat Mack*, the first time the now famous EA cube, circle and triangle would feature on a cover. *Archon* from Freefall Associates and Ozark Softscape's ground-breaking *MULE* would bring up the rear.

Bill Budge's *Pinball Construction Set* would follow soon after, created using the in-house game tools; the first time gamers could create their own games without any coding knowledge. All were originally released for the Atari 800, but Apple II and C64 versions soon followed. This was a heady time for EA, the first time it had something tactile after almost 12 months of hard-selling ideas to retail. Trip recalls this period as one of the most notable for EA, such was the clamour for its software, "We took all 22 employees to our warehouse in May 1983, to pack and ship out our first orders." From CEO to admin, everyone mucked in to ensure retail got what it wanted. Demand for EA games was massive and with Ariolasoft distributing for EA in Europe it would only grow.



The Bard's Tale was an awesome RPG, and the sequel wasn't at all bad either.



Heart of Africa is the unofficial follow-up to *The Seven Cities Of Gold*.





How *Mind Mirror* ever came to become an actual computer game is anyone's guess.

SIX OF THE BEST

MULE (1983)

The first time that a truly multiplayer experience was realised at home. *MULE* saw four players face off against each other to become the founder of a colony planet. Always four players, with or without friends, the game is noted for its great use of supply-and-demand economics, and plays like a four-player game of chess. *MULE* is as good today as it was back then.



Archon (1984)

Developed by Freefall Associates, *Archon* truly was a revolution in its day. The premise was chess goes *Dungeons & Dragons*. But it felt as much like a role-playing game as it did like a game of chess. In *Archon*, moving on to an occupied square didn't remove a piece, but instead it started a one-on-one combat cycle, which was truly awesome. The sequel was no slouch either.



Skate Or Die! (1987)

Skate Or Die! took the previous year's *California Games* and made a complete game from its strongest event. Made by the same team, it cashed in on the resurgence in skateboarding as a culture. A variety of parks were available, perform well, and repeat ad infinitum. Well received, it was the C64 version that stood out, thanks to some of Rob Hubbard's finest work.



Mail Order Monsters (1985)

What do you do after redesigning chess? For Paul Reiche III and Evan and Nicky Robinson the answer was easy, make dreams come. Build a monster, add weapons, save to disk, and take it to your friend's and battle with their home-grown monsters. European gamers only got to play the rather awesome single-player game due to a lack of disk drives. Shame.



The Bard's Tale II (1986)

The sequel to the acclaimed *Bard's Tale* sees the addition of ranged weapons such as bows and catapults. The player's quest is to find and re-forge the seven pieces of the broken destiny wand that will restore peace to the realm. A forerunner to the *Dungeon Master* games, this is storytelling par excellence. Watch out for the brilliant ending, bet you didn't see that coming.



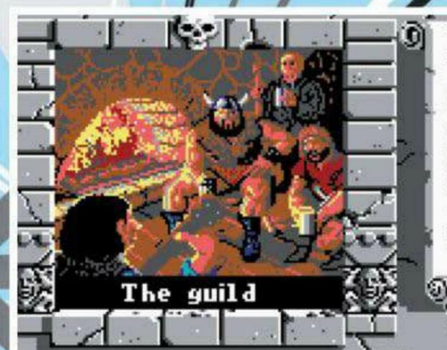
Dr J And Larry Bird Go One On One (1983)

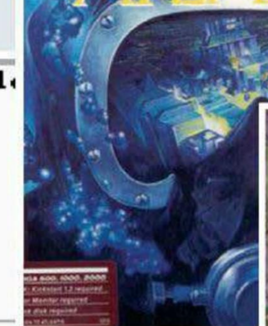
This 1983 classic is not only a superb basketball game, it was also the first time that a real personality starred in a videogame, giving birth to videogame licensing. The game plays as a series of challenges to find the greatest player. An early glimpse of what EA would become perhaps, but a very lucrative quality franchise for EA regardless.

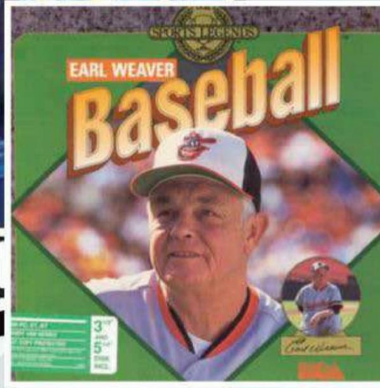
Even the effervescent, incredibly confident Mr Hawkins couldn't have hoped for more. *Pinball Construction Set* was the real hit of the bunch and topped multiformat charts on both sides of the Atlantic, making a star out of Bill Budge at the same time. The second wave of EA releases would prove even more popular.

First to come after the initial launch was *Dr J And Larry Bird Go One On One*, released late that same year and developed by Eric Hammond. Trip had direct involvement in the game's design and remembers this time as a genesis for two new genres. "I had designed my first sports game in 1971, using cards and dice," he says. "I'd always wanted to make computer sports games, and in 1983 I got this process started at EA by conceiving and designing the first of what would become EA Sports, *Dr J And Larry Bird Go One On One*. This was actually the first videogame in which celebrities appeared as themselves, which of course became a mainstay trend. I personally lined up the developer, producer and got the athletes signed, and the programming took place about ten feet away from where I sat." A much easier sell Stateside than in Europe, the game still sold well on both sides of the Atlantic. But it wasn't about the game itself, more that two fledgling genres had emerged that would define EA for the short and long-term future.

Despite its early success it wouldn't be until 1984 and Will Harvey's *Music Construction Set* that EA would achieve its first million-selling title, only to be outdone a year later when Rick Koenig took the series further with the *Racing Destruction Set*, which outsold both of its predecessors. EA, without looking, had stumbled across its first franchise. With three years and three games under the same banner, 1984 would prove to be an exceptional year for EA, but for other reasons. The existing software line-up continued to sell, the more formats the games were converted to, the more money EA made, but more significantly for the company longer term, however, was that when production of *One On One* had been completed, Trip used all his learnings to sketch out a new sports game. "I immediately moved on to a much more ambitious design for my favourite sport, football, and brought John Madden on board," he says. "I designed the game and met with Madden several times to get his input, including a two-day trip on the train. *Madden Football* was very late in development and became known around EA as 'Trip's folly.' Everyone thought the project should be killed. The accountants insisted that all the money, including Madden's advance, be written off as unrecoupable. But I'm a determined fellow and eventually got it right." This meant that EA was turning producer as well as publisher, the design tools had helped this culture to grow organically, and with Trip working night and day on *Madden*, and the green light being given to start development on EA in-house titles, Trip needed help. From a standing start EA had seen turnover rise from $5m to $11m in two years, in 1985 the forecast was $18m, and so at the 11th hour Larry Probst was brought in as CEO of sales. With Probst running sales and dealing







E A has licensed several well-known sports celebrities for its sports games. Earl Weaver entered the Baseball Hall of Fame in 1996.

The Bard's Tale series proved to be an extremely popular franchise for EA, which makes you wonder why it hasn't resurrected the franchise. It would work brilliantly on the DS.

with the retailers, Hawkins was free to work on the business and develop his ideas without the day-to-day nuances and distractions of a very rapidly expanding business.

Along with games and utility software for the home, by 1985 EA had also started making software for schools and colleges dubbed 'Crash Courses'. These courses proved assailable for the average student and prompted a renewed interest in their studies. 1985 wasn't a difficult year for EA, as the hard work had been done in the previous years, with *Starflight*, *The Bard's Tale* and *Mail Order Monsters* setting the gaming press alight and delighting gamers, while sequels to previous works were released to suitably strong sales. Larry would concentrate on refining the sales model for EA and studying the gaming trends and distribution models in Europe, while Trip would return to his opus, the as yet without moniker *John Madden Football*.

For Trip, the realisation of EA was a dream, and using EA to develop *Madden* was a licence to have Christmas everyday. "My friends would tell you that EA was really created by me as an excuse to make a football game, and this is not far from the truth," he admits. "My goal, as always, was the verisimilitude, the authenticity. I knew football, but wanted professional help. First I went to a local coach, Joe Kapp, but when he asked for his name on the game and royalties, I thought if I had to do that I should just go to the top of the food chain. Madden was starring in TV ads and was already a great broadcaster, so I knew he was in the public eye, so I picked him and called his agent. After we signed the deal, Joe Ybarra and I flew to Denver with programmer Robin Antonick and an assistant, we met him at the train station and came west for two days on the train. I had already produced a 60-page design and I took John through it and asked him thousands of questions. Later he gave me one of his Raiders playbooks and introduced us to sports journalist Frank Cooney. John helped with myriad details, but I had to do the heavy lifting, including drawing up the 150 plays and organising every detail of the game, including rosters. Cooney helped with the rosters and John would meet with us periodically to correct errors. The way he would do this would go like this, when Robin Antonick mistakenly put the fullback behind a guard: 'What the f*ck is this? I f*cking told you already that this f*cking guy lines up behind the f*cking tackle? What the f*ck is he doing here?'" remembers Trip.

Overbearing NFL commentators weren't all Trip had to concern himself with either, which may allay the delays in *Madden*'s development somewhat.

In 1986 the decision was made that EA would go it alone in Europe. Making the announcement at the January 1987 CWS in London, to outline EA's intent to leave behind its distribution deal with Ariolasoft and to set up a base in Europe. Back in the States, EA had long left Activision behind in the sales charts to become the number one publisher; Europe would be a different beast. Not for the first time, EA would enter the battleground in a blaze of controversy. Despite CRL and Nexus already being part of EA, gamers in Europe didn't realise this. *Crash* magazine ran a scathing, patronising report of the exclusive interview that Trip had given them. Barnaby Page said: "Electronic Arts – the very name suggests William



Mail Order Monsters could be the greatest game you've never played.



Who would have thought EA would bring it home in 1983?

EA TIMELINE 1965-1989

1965 TRIP REALISES THAT HE COULD 'LEARN BY DOING' AND IS MORE STIMULATED BY PLAYING BOARD GAMES THAN READING OR WATCHING TELEVISION

1968 HE BECOMES INTERESTED IN DESIGNING SPORTS GAMES WITH REAL PLAYERS, STATS AND STRATEGIES AFTER DISCOVERING STRAT-O-MATIC

1970 TRIP FINDS PHILOSOPHER JOHN DEWEY, WHICH SPURS HIS VIEW OF USING GAMES TO LEARN THROUGH PLAY AND SIMULATION

1971 HE DESIGNS AND MAKES HIS FIRST SIMULATION GAME USING CARDS, CHARTS AND DICE

1972 HE USES PDP-8, HIS FIRST COMPUTER, AND REALISES HE CAN FULFIL HIS GAMING DREAMS BY 'PUTTING REAL LIFE IN A BOX' (EG LET THE COMPUTER DO THE WORK OF SIMULATION)

1973 HE BEGINS PROGRAMMING COURSES AT HARVARD; PROGRAMS A FOOTBALL SIMULATION GAME AND DEVELOPS IDEAS FOR OTHER GAMES

1974 CREATES CUSTOM MAJOR IN 'STRATEGY AND APPLIED GAME THEORY'

1975 LEARNS ABOUT MICROPROCESSOR AND THE COMPUTER STORE AND DECIDES TO START HIS OWN GAME SOFTWARE FIRM IN 1982

1977 DOES CONSOLE GAME RESEARCH WITH FAIRCHILD ON HIS GAME IDEAS; BEGINS WORK ON FIRST MAJOR PUBLISHED STUDY OF PERSONAL COMPUTER INDUSTRY, PUBLISHED BY CSI; SEES DEBUT OF APPLE II AT WC COMPUTING FAIRE; VISITS HIS FIRST BYTE SHOP

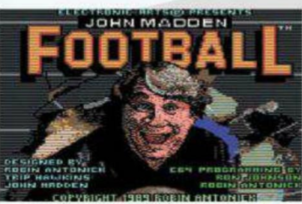
1978 JOINS APPLE AND GETS HIS FIRST PC (APPLE II) AND PROGRAMS SOME GAMES FOR IT, AND BEGINS TO DEVELOP RELATIONSHIPS WITH GAME DEVELOPERS

SIX TO MISS



Demon Stalkers (1987)

A cerebral *Gauntlet*, this top-down adventure-'em-up had 100 levels but was pretty poorly received upon its release. The game's ambition ultimately proved to be its undoing. The mazes were fierce, some even taking place over multiple levels. In the end, solving puzzles at a frenetic pace left gamers cold.



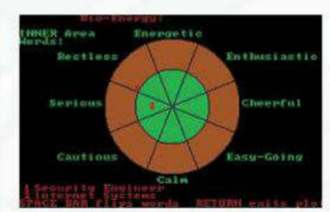
John Madden Football (1989)

Using plays taken from Madden's playbook from his time as Oakland Raiders' coach, this was Trip's opus. The detail was overwhelming for the casual gamer, with plays taking five minutes to get in motion. With poor graphics and a clunky interface, the first *Madden* is nothing more than a curio as to the genesis of EA's biggest sports franchise.



Marble Madness (1986)

The arcade monster found its way home through EA. A game relying on a track ball, incredible visuals and custom-made sound hardware was never going to make an easy transition to the home. The C64 has the truest to the arcade port. Why EA thought the Spectrum's rubber keyboard could emulate it is anyone's guess, because it couldn't.



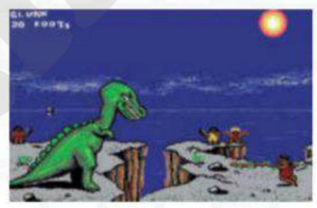
Timothy Leary's Mind Mirror (1985)

"Turn on, tune in, drop out," made the man famous to our parents and their Woodstock generation. If anyone ever needed an illustration of the damage hallucinogens might cause, then this is surely it. Have a thought, type it in, compare it to another thought and see what other people are thinking about your thought. Think about it.



Dan Dare: Pilot Of The Future (1986)

The Eagle lands in videogame form, a great game that was different on all formats. But the Spectrum version is a shambles. Gone are the lush visuals of the C64 and CPC versions, replaced by shrunken green sprites that are unidentifiable as characters from the comic. A rare find, to see how bad a good game can be on the wrong format.



Caveman Ugh-lympics (1988)

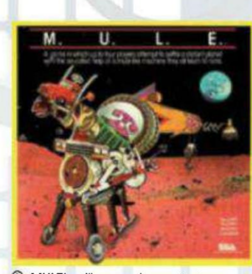
A spin-off of the Olympics featuring cavemen and the spectator sports that used to play to a packed Stonehenge for the merriment of our Neanderthal ancestors. The events are very limited and over very quickly, and with only six events in total, the most joy to be had from the game comes when you stave it of power.

"FOR TRIP, THE REALISATION OF EA WAS A DREAM. USING EA TO DEVELOP MADDEN WAS A LICENCE TO HAVE CHRISTMAS EVERYDAY"

M 'Trip' Hawkins, 33, founder, president and pundit. His expansive talk and his expanding corporation, which officially launched its European operation at The PCW Show, are shot through with an American approach to games software: the programmers are artists (his word), the products are elaborate and finely tuned coffee-table C64-oriented jobs, many of them sophisticated battle/vehicle/sports simulations or adventure/role-playing games (RPGs). So, possible EA Spectrum titles include *Apollo 18: Mission To The Moon*, *Chessmaster 2000* (superchess), *Skate Or Die!*, *Lords Of Conquest* (super *Risk*), *Test Drive* and *Train Escape* ('more than just the greatest fast action arcade fun', apparently) as well as some more soothing sports sims, *Mini-Putt* and *World Tour Golf*. It all sounds rather cool, calm, professional; not crazy at all; grown-up, in fact."

Headed by David Gardner and Mark Lewis, it wouldn't take long for EOA (a Welsh company owned the EA name until 1997 in the UK) to make its mark, despite the rather negative response that the British gaming press seemed to exude towards the company. In 1987 *Skate Or Die!* was released to the masses, a skateboarding game based on the bestselling *California Games*, written by the same Epyx team, in fact. EOA looked like a new company, and as *Skate Or Die!* was the first internally produced game to be released proper, Gardner and Lewis milked the 'what a debut' accolades for all they were worth. EOA followed this by publishing the seminal *Populous* the next year and then acquiring Bullfrog.

Stateside, Trip had finally finished *Madden*. Released in late 1988 for the Apple II, it revitalised the machine, and subsequent ports would arrive throughout 1989. In five years, EA had gone from being a one-man publisher to a globe-striding corporation. The games industry was generally healthy, albeit a bit stale, and there was plenty of competition for EA from US Gold, Ocean, Gremlin, Activision and the various console manufacturers. Trip always worked in the future and, as the Eighties slipped towards history, an unlikely court case between Nintendo and Tengen would give him the angle and edge that would become EA's point of difference.



MULE is still among the greatest multiplayer games ever made.

TURN TO PAGE 112 FOR PART 2

1979 WORKS WITH VERY TALENTED SOFTWARE ENGINEERS AT APPLE AND REALISES THEY WERE ARTISTS THAT COULD BE MANAGED, PROMOTED, AND COMPENSATED LIKE HOLLYWOOD MANAGES ITS ARTISTS

1980 BECOMES FOUNDING BOARD MEMBER OF SSI TO LEARN COMPUTER GAME BUSINESS

1981 HE'S INVOLVED IN APPLE'S SHIFT FROM SELLING THROUGH DISTRIBUTORS TO DIRECT TO RETAILERS, AND REALISES HE WANTS TO SELL DIRECT TO RETAILERS, A RADICAL NOTION AT THAT TIME

1982 AMAZIN' GAMES FORMED AND CHANGES ITS NAME TO ELECTRONIC ARTS

1983 ELECTRONIC ARTS GIVES BIRTH TO CELEBRITY LICENCES BEYOND ENDORSEMENTS

1984 ELECTRONIC ARTS ACHIEVES ITS FIRST MILLION-SELLING TITLE

1985 ELECTRONIC ARTS REPLACES ACCOLADE AS THE NUMBER ONE SOFTWARE PROVIDER IN THE US

1986 EA DELIVERS ITS FIRST FULL INTERNALLY PRODUCED TITLE SKATE OR DIE. THE GAME IS CENSORED FOR THE EUROPEAN RELEASED

1987 ELECTRONIC ARTS OPENS ITS EUROPEAN HEADQUARTERS IN THE UK, SEVERING TIES WITH ARIOLASOFT AND CHANGING UK GAME DISTRIBUTION FOREVER

1988 ELECTRONIC ARTS BUYS FLEDGLING DEVELOPER BULLFROG

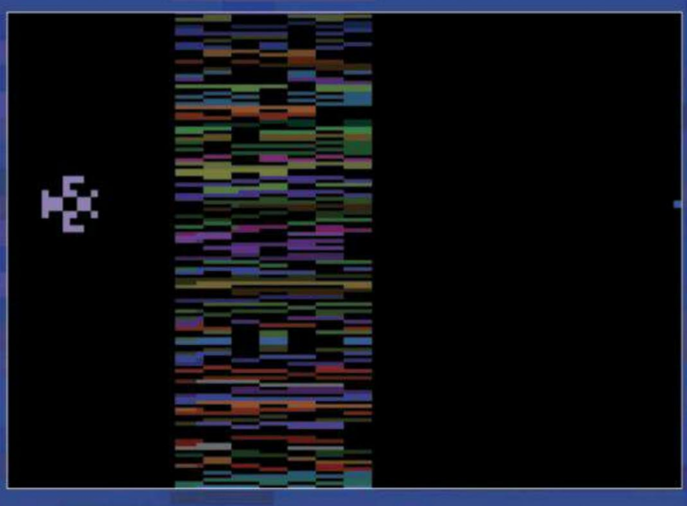
1989 EA REVERSE ENGINEERS THE SEGA MEGA DRIVE. THIS SMALL MOVE WILL CHANGE THE FACE OF GAMING FOR THE NEXT DECADE

THE CLASSIC GAME

YARS' REVENGE

So what makes a game timeless? Is it the characters, the graphics – we of all gamers know it's not that – the timing or innovation? As Stuart Hunt reveals, if the truth be known, all we need is a nice old slice of revenge





Every now and then a game appears that becomes so synonymous with the machine it appears on that it almost seems to take on a life of its own. You think *Mario Kart*, you immediately think SNES; *Shenmue*: Dreamcast; *Chase HQ*: Alan Sugar. Howard Scott Warshaw was responsible for giving the 2600 its most commercially insolvent videogame – the most out-of-the-box thinking movie tie-in known to man: *ET*; and one of the greatest videogames ever: *Yars' Revenge*.

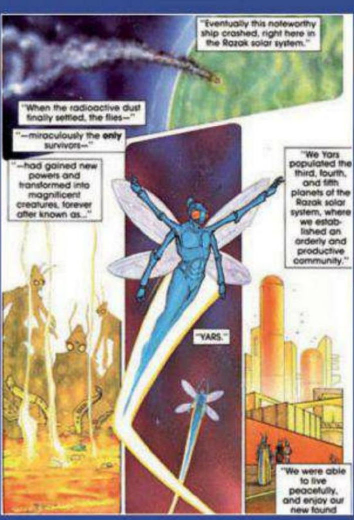
If there was any good to be found in *ET*, it's that it helped demonstrate that impressively technical things were possible on the Atari 2600; amazing effects that would be rushed into a crappy game about a homesick puppet falling down black holes. With *Yars' Revenge*, almost the same rules apply – almost. Warshaw shows us that he's more than adept at producing brilliant things on the Atari but, this time, uses these skills to create something special.

If you've ever watched the original commercial for *Yars' Revenge*, you'd be forgiven for thinking that the entire concept took Atari around 30 seconds to conjure up. A hirsute Atari coder (presumably) is seen perched in a chair, back to us, staring at a huge television. It's here that he casually plucks gaming ideas from his head. At the same time that the Qotile, the shield and Yar enter his skull, the game begins to take shape, in real-time, on the overtly large monitor in front of our very eyes.

Anyway, the point that this advert succeeds in making is this: *Yars' Revenge* is simple, and simplicity breeds addiction. *Tetris*, *Pac-Man* and *Yars' Revenge* all represent clearly defined rules of engagement across one game screen.

The greatest thing about *Yars' Revenge* is that it's a concentrated cartridge of brilliance. As many of you are probably aware – we're sure we've mentioned it once or thrice – *Yars' Revenge* took its name from the CEO of Atari, who at that time was Ray Kassar, Yar being Ray spelt backwards.

Yars' Revenge was loosely based on the 1980 Cinematronics arcade blaster *Star Castle*. With the deformation, the enemy shield you had to slowly pick away and the harassing torpedoes that followed your ship around, both games felt similar. However, in Atari's version the enemy target was moved from the centre to the far right of the screen, and this extra space allowed Warshaw to include an invulnerability field in the centre of the screen, known as the Neutral Zone, where Yar, a super-evolved mutant housefly, could nibble away at the shield that was protecting his target.

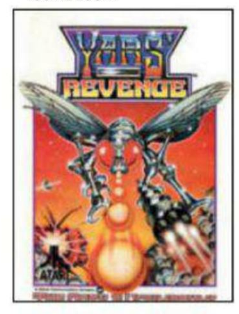


» The comic book makes for some good bedtime reading once you've finished playing the game.

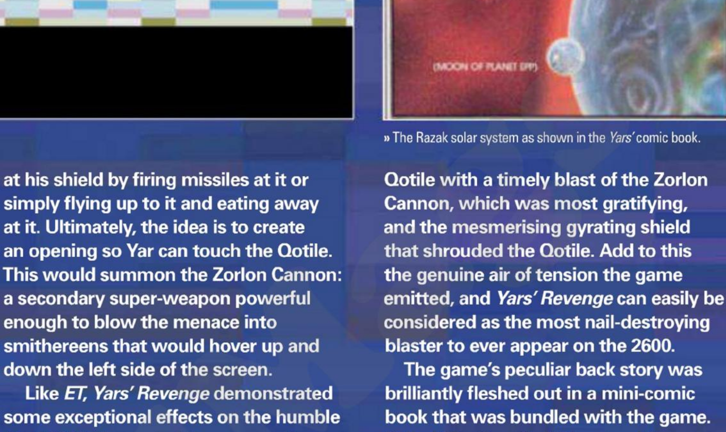
IN THE KNOW



- » **PUBLISHER:** ATARI
- » **DEVELOPER:** ATARI
- » **RELEASED:** 1981
- » **GENRE:** SHOOT-'EM-UP
- » **EXPECT TO PAY:** A FEW QUID, IF YOU'RE LUCKY




» "Great shot kid, that was one in a million."

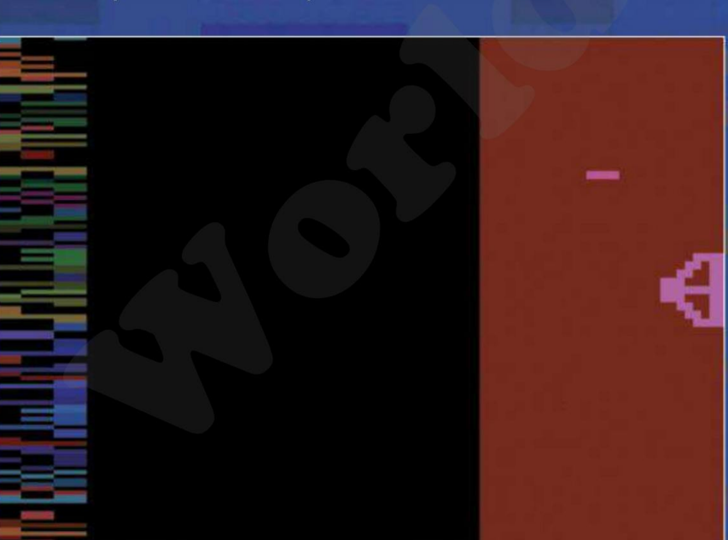


» The Razak solar system as shown in the *Yars'* comic book.

The Qotile was a triangular entity protected by an impervious homing missile that Yar could only safely touch when he was buzzing around inside the Neutral Zone. Unfortunately for Yar, continually forcing you out of your dazzling foxhole was the Qotile itself, which would annoyingly morph itself into a deadly swirl and spit at Yar like a demented scorpion. It was an enemy attack that would laugh in the face of the shield and force the player to skilfully dodge the powerful attack. To kill the Qotile you had to whittle away at his shield by firing missiles at it or simply flying up to it and eating away at it. Ultimately, the idea is to create an opening so Yar can touch the Qotile. This would summon the Zorlon Cannon: a secondary super-weapon powerful enough to blow the menace into smithereens that would hover up and down the left side of the screen.

Like *ET, Yars' Revenge* demonstrated some exceptional effects on the humble Atari 2600. For a start there were the blistering, screen-eating explosions that would occur when Yar blasted the Qotile with a timely blast of the Zorlon Cannon, which was most gratifying, and the mesmerising gyrating shield that shrouded the Qotile. Add to this the genuine air of tension the game emitted, and *Yars' Revenge* can easily be considered as the most nail-destroying blaster to ever appear on the 2600.

The game's peculiar back story was brilliantly fleshed out in a mini-comic book that was bundled with the game. Called *The Quotile Ultimatum!*, it detailed who the Yars were, how it was they turned from common housefly to angelic-looking humanoids and, more importantly, the actual rules of play. Of all the ten Atari-related comic books that were produced and packaged inside selective Atari 2600 games, *The Qotile Ultimatum!* is perhaps the most special. Why? Well the others were outsourced to comic stalwart DC Comics, but *The Quotile Ultimatum!* was created entirely in-house and, surprisingly, it's not a bad little read either, as far as interstellar housefly warfare goes.


» Watch our for that jerk's swirl move. It's fast and unpredictable.


» *Yars'* is one of the best-looking games on the 2600. Straight up.

"WITH ITS GENUINE AIR OF TENSION, YARS' REVENGE CAN EASILY BE CONSIDERED AS THE MOST NAIL-DESTROYING BLASTER TO EVER APPEAR ON THE 2600"

DEVELOPER HIGHLIGHTS

E.T.
SYSTEM: ATARI 2600
YEAR: 1982

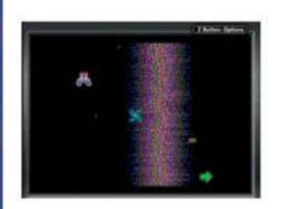
RAIDERS OF THE LOST ARK
SYSTEM: ATARI 2600
YEAR: 1982

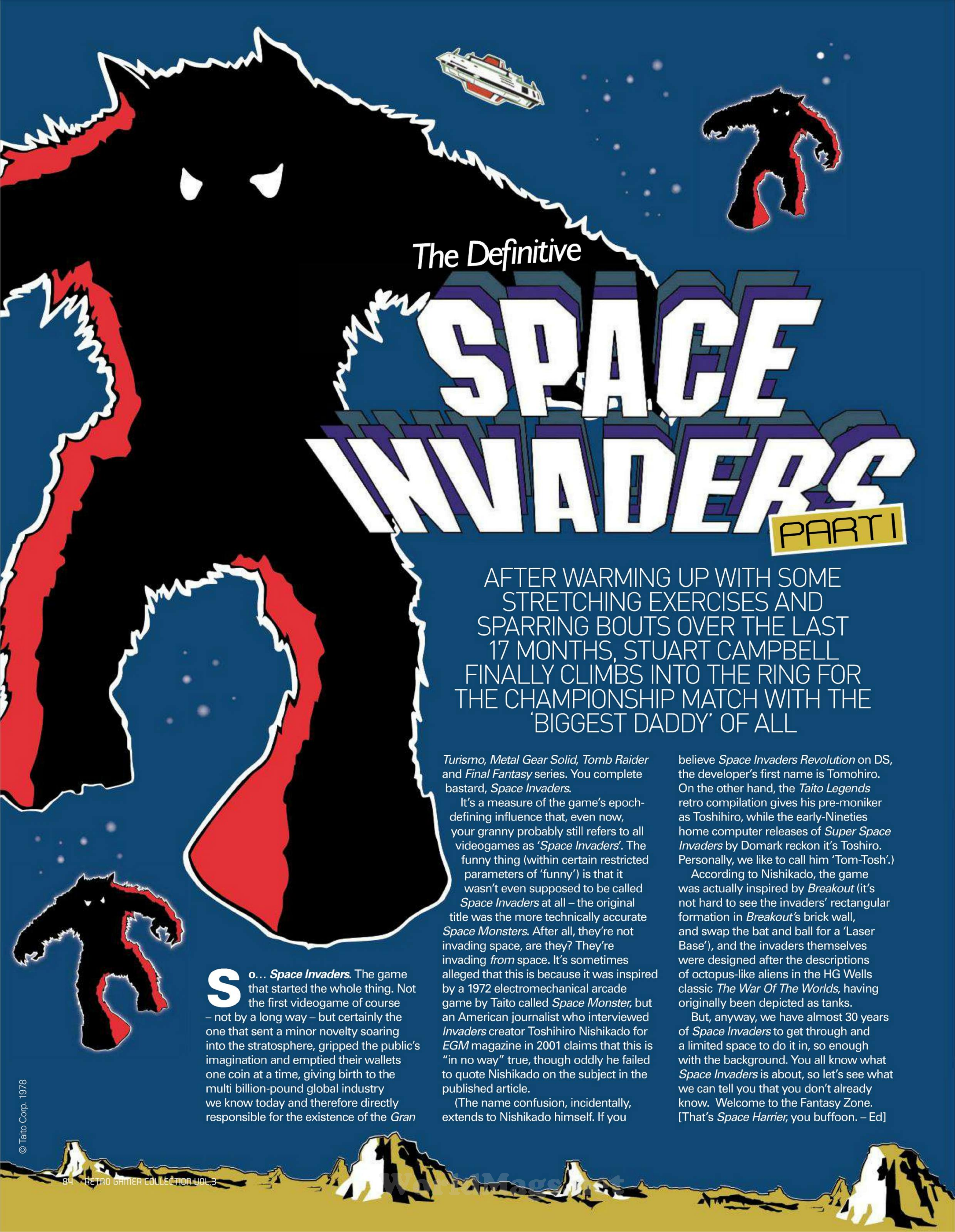
SOLARIS (PICTURED)
SYSTEM: ATARI 2600
YEAR: 1986



THE WHOLE NINE YARS

For many years no one would hear a peep out of the Yars; everyone would assume their mission was finished and they either perished or lived fruitful lives. That was until Telegames decided to dust off the game for a remake on the Game Boy Color. Despite looking pretty similar to the Atari original, the gameplay itself would be slightly different. Rather than having the action played out on one screen, the Game Boy Color version featured scrolling, making the Razak solar system slightly bigger. This meant that if you veered away from the Qotile you'd have to listen out for audio cues or keep a beady eye on an icon at the base of the screen to tell you whether it was prepping an attack. It does work pretty well. Also, Telegames introduced a secret warp-zone level that plonked Yar inside a rather basic side-scrolling blaster, and a password system that allowed you to, well… you get the idea.





The Definitive

SPACE INVADERS PART I

AFTER WARMING UP WITH SOME STRETCHING EXERCISES AND SPARRING BOUTS OVER THE LAST 17 MONTHS, STUART CAMPBELL FINALLY CLIMBS INTO THE RING FOR THE CHAMPIONSHIP MATCH WITH THE 'BIGGEST DADDY' OF ALL

So… *Space Invaders*. The game that started the whole thing. Not the first videogame of course – not by a long way – but certainly the one that sent a minor novelty soaring into the stratosphere, gripped the public's imagination and emptied their wallets one coin at a time, giving birth to the multi billion-pound global industry we know today and therefore directly responsible for the existence of the *Gran Turismo, Metal Gear Solid, Tomb Raider* and *Final Fantasy* series. You complete bastard, *Space Invaders*.

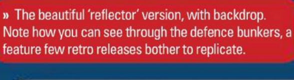
It's a measure of the game's epoch-defining influence that, even now, your granny probably still refers to all videogames as '*Space Invaders*'. The funny thing (within certain restricted parameters of 'funny') is that it wasn't even supposed to be called *Space Invaders* at all – the original title was the more technically accurate *Space Monsters*. After all, they're not invading space, are they? They're invading *from* space. It's sometimes alleged that this is because it was inspired by a 1972 electromechanical arcade game by Taito called *Space Monster*, but an American journalist who interviewed *Invaders* creator Toshihiro Nishikado for *EGM* magazine in 2001 claims that this is "in no way" true, though oddly he failed to quote Nishikado on the subject in the published article.

(The name confusion, incidentally, extends to Nishikado himself. If you believe *Space Invaders Revolution* on DS, the developer's first name is Tomohiro. On the other hand, the *Taito Legends* retro compilation gives his pre-moniker as Toshihiro, while the early-Nineties home computer releases of *Super Space Invaders* by Domark reckon it's Toshiro. Personally, we like to call him 'Tom-Tosh'.)

According to Nishikado, the game was actually inspired by *Breakout* (it's not hard to see the invaders' rectangular formation in *Breakout*'s brick wall, and swap the bat and ball for a 'Laser Base'), and the invaders themselves were designed after the descriptions of octopus-like aliens in the HG Wells classic *The War Of The Worlds*, having originally been depicted as tanks.

But, anyway, we have almost 30 years of *Space Invaders* to get through and a limited space to do it in, so enough with the background. You all know what *Space Invaders* is about, so let's see what we can tell you that you don't already know. Welcome to the Fantasy Zone. [That's *Space Harrier*, you buffoon. – Ed]





» The beautiful 'reflector' version, with backdrop. Note how you can see through the defence bunkers, a feature few retro releases bother to replicate.



1978
SPACE INVADERS (ARCADE)

Confusion starts early with *Space Invaders*. Even the first game in the series came in a variety of versions – the one you'll probably be most familiar with is the 'reflector' version produced by Midway for the Western market, where the graphics were reflected through a mirror onto a painted backdrop of a lunar surface, making them appear semi-transparent. The monitor also had strips of coloured cellophane overlaid on it to make the graphics appear green toward the bottom of the screen, white in the middle and orange at the top. The original Japanese sit-down cocktail-table version, however, had a purely black-and-white display with no backdrop (because you were looking directly at the monitor instead of a reflection), and most Japanese versions of the 'reflector' model lacked the green and orange cellophane strips, presenting the graphics all in white. Later revisions in Japan added rainbow-coloured cellophane strips in a variety of reds and blues and purples, and an even later revision displayed the game in full colour. (You can identify this one over the cellophane-colour edition by the way the entire screen washes red when your Laser Base is destroyed.)

Surprisingly, *Space Invaders* was converted to very few home formats in the Seventies and Eighties. Atari had bought the licence for home use, initially on the all-conquering VCS, but while it was happy to allow even the biggest of licensed and original IP to be produced for other formats (like *Centipede*, *Pac-Man*, *Defender* and *Pole Position*, which all saw multi-format releases under the Atarisoft label), *Space Invaders* never appeared on rival consoles like the ColecoVision or Intellivision, and not even on home micros like the Apple II, C64 or Spectrum. Not until midway through the Eighties did an official *Space Invaders* finally show up on a non-Atari platform, and even then it was usually treated abominably – the 1985 NES game, for example, has awful, tiny graphics and sounds like someone throwing a plastic bucket full of canaries down some metal stairs.



1978
SPACE INVADERS (ATARI VCS)

The VCS version of *Space Invaders* was the first ever killer app, quadrupling the console's sales when it was released at the height of the coin-op's popularity (by which time the VCS was already three years old). Also the first official arcade game to home conversion (not counting dedicated *Pong* machines), it actually bears only the most basic of similarities to its arcade parent. With just 36 invaders instead of 55, three defence bunkers instead of four, several simplifications to the gameplay and crude, ugly graphics, it had to do something to compensate, and it did so by offering a breathtaking 112 variations on the core game design. You could have moving bunkers, zigzagging shots, invisible invaders who only briefly revealed their position when you shot one, and all manner of other options, including a wide and highly inventive range of competitive and co-operative two-player modes. There was even a secret cheat mode (hold down the Reset button when you switch the console on to get a double shot), plus two difficulty settings which effectively increased the number of variations to 224 (or a ludicrous 448 including the double-shot).

It might not have looked much like the *Space Invaders* everyone knew and loved (see Attack Of The Space Mutants on page 86), but the VCS version had so many great qualities of its own that it sold millions, and is still a challenging and exciting game today.

» You could argue that the VCS invaders are more octopus-like, and therefore truer to Nishikado's original vision, than the arcade ones.







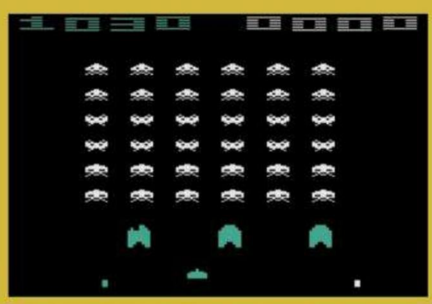
ATTACK OF THE SPACE MUTANTS

The VCS version of *Invaders* was a little controversial at the time because it didn't resemble its coin-op parent. Most people assumed this was due to unavoidable hardware limitations, but in fact the VCS was entirely capable of producing a far more faithful rendition had Atari chosen to do so. This point has subsequently been proven by a whole raft of homebrew hacks written for VCS emulators (though some of them have been turned into real cartridges, too) – most of them using the same ROM size as the original to avoid accusations of cheating by using more memory than was economically viable in 1978.

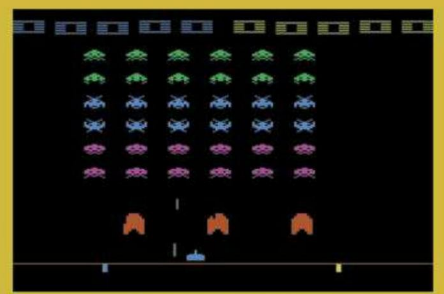




» The first version simply altered the graphics to make the invaders look much more like their arcade counterparts.



» A further hack also changed the palette to a much more authentic colour scheme.



» The popular 2004 '*Space Invaders Deluxe*' hack switched the colour scheme for that of *Part II*, and also used an extra 4K of ROM to add a pretty title screen and improve sound. The double shot was standard, for super-fast action, and even *Part II*'s between-levels animated skits were included.



» This version, *Space Instigators*, goes further, with the correct number of bunkers and an invader formation much closer to that of the original.



Hacking the VCS cart wasn't restricted to homebrew coders, though – Atari itself did it in 1983. A special limited edition version of the game called *Pepsi Invaders* (sometimes erroneously known as 'Coke Wins'), with the invaders replaced by the letters P-E-P-S-I, was officially produced by Atari for employees of the Coca-Cola Company and given away at a sales convention in 1983. However, original author Rick Maurer had left Atari (supposedly partly in protest at the measly $11,000 he was paid) shortly after the release of *Invaders*, and so another coder had to hack the original. Only 125 copies of this version are known to have been made, and it's one of the rarest videogames in existence.



» *Pepsi Invaders* is a three-minute time-attack version of the game, at the end of which you always get the message 'Coke Wins', which is presumably where the title confusion comes from. (To ensure Pepsi never triumphs, the player gets infinite lives.)



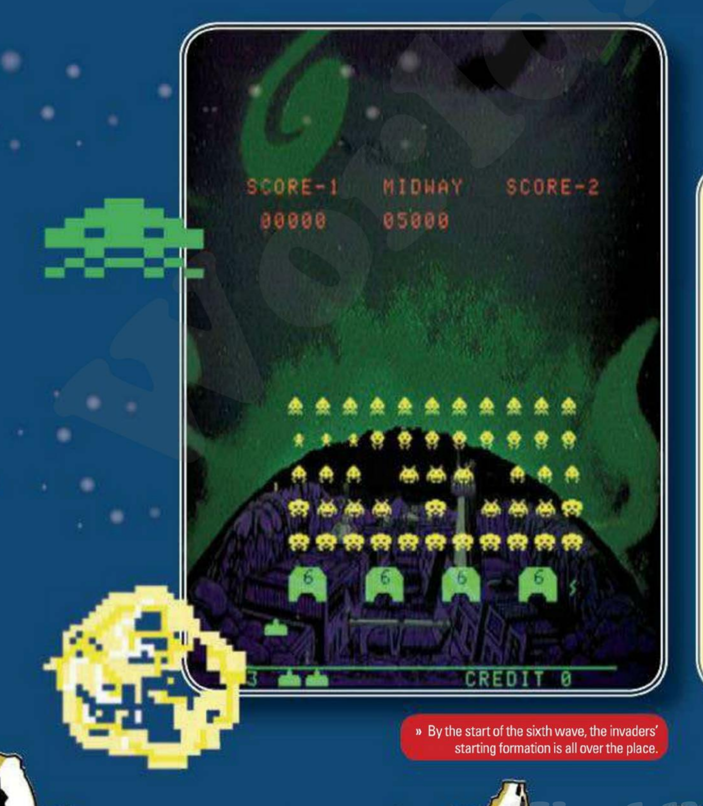
1979
SPACE INVADERS PART II (ARCADE)



As obsessed gamers mastered the original, Taito wasted no time in rushing out an arcade sequel. *Space Invaders Part II*. Derived from the full-colour cocktail version (although curiously it simulated the cellophane model, with shots changing colour as they moved up or down the screen), it had no backdrop even on the stand-up version, and a modest collection of new features, both cosmetic (little animated skits at the start and end of each stage) and gameplay-related. There was a new UFO in addition to the classic 'Mystery Ship' – a flashing saucer worth a whopping 500 points (for reference, an entire original wave of invaders nets you just 990) – and both craft drop reinforcements into the invader battalions from Level 3 onwards, filling in any gaps in the top row once per wave. (Pro tip: if you shoot the reinforcements as they drop, they fall to the bottom of the screen and their lifeless bodies serve as auxiliary defence bunkers.) Starting on Level 4, the alien formations also feature 'Splitter' invaders, normal-looking invaders identifiable because they appear in the wrong rows, which divide into two 'Breathers' when shot, who grow larger and smaller in time with the machine's 'heartbeat' sound effects. ('Breathers' appear in their own right from Level 6.)

Score whores were also catered for by a knowing little nod to a bug in the original game, whereby if the last invader left in a level was one from the bottom two rows it would leave and then erase a trail as it zoomed left and right. In *Space Invaders Part II*, if you managed to trigger this 'bug', you'd net a hefty points bonus (500 or 1,000 points depending on the invader's starting position) and be rewarded with a pretty little 'rainbow' display. And for the first time in an *Invaders* game, if you did net a monster score (now you could display up to 99,990 points rather than the original's absurdly conservative 9,990) you could actually sign your name on the high-score table.

» Most people don't know that the 'rainbow' invader can also be worth 800 points if it started as the bottom invader from the middle column. But now there is proof.



» By the start of the sixth wave, the invaders' starting formation is all over the place.



1980
DELUXE SPACE INVADERS (ARCADE)

This Western variant on *Part II* is the great 'lost' *Space Invaders* game. Never released on a retro compilation (Taito always uses *Part II*, and Midway presumably no longer has the rights) and never converted to a home format at the time, there's no legal way to play *Space Invaders Deluxe* short of owning an original cabinet. The differences between *SID* and *Part II* are largely superficial – the graphics are yellow and green rather than full colour, there's a lunar-city backdrop, the 'Flasher' is worth 200 points instead of 500, and 'Splitters' appear from Level 2 rather than Level 4, but it's a nicer sequel than *Part II* (more atmospheric, harder, and with more balanced scoring) and it's a shame that it's been overlooked for posterity. Incidentally, although it's called *Deluxe Space Invaders* on the cabinet, advertising flyers, and so on, for some reason the game has historically been universally referred to as *Space Invaders Deluxe*. Weirder still, the game's title screen actually still refers to itself as *Space Invaders Part II*.

The Definitive SPACE INVADERS

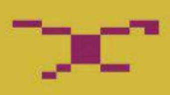




» When you lose all your lives, your Laser Base is replaced on screen but frozen on the spot and unable to fire, and the game doesn't actually end until the invaders march down to the bottom of the screen and invade you. Thank goodness for the reset button.



1980
SPACE INVADERS (ATARI 400/800)



The third *Invaders* of the Eighties is clearly of the VCS family. The most striking change is the rocket ship on the left-hand side, out of which the attacking invaders emerge in columns of six. After clearing a wave, the rocket ship descends a few pixels, and when it reaches the bottom, there's an odd scene where a flashing red Mystery Ship comes down and carries off your Laser Base – from then on the rocket ship remains at its lowest level till the end.

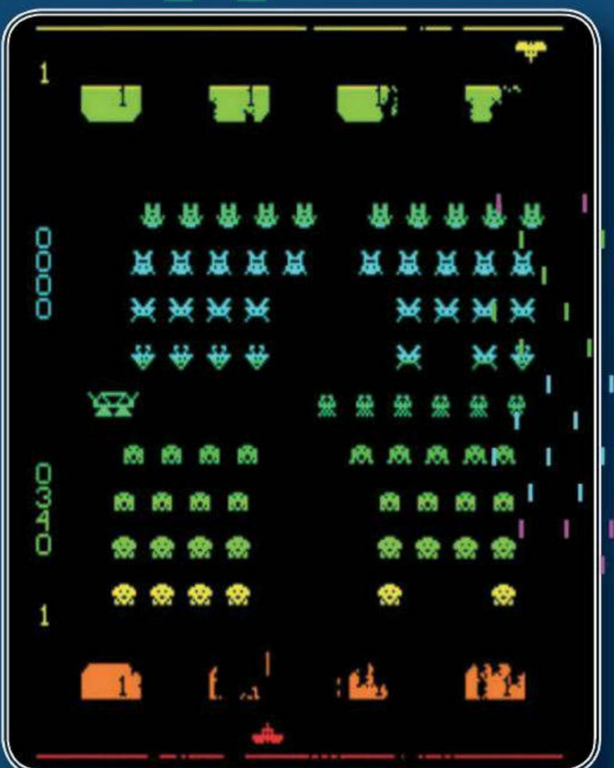
You get no defence bunkers, but you do have an auto-firing laser, which can take out a column of invaders in a flash – the invaders have one bomb between them, taking the colour of the invader that dropped it. Scoring is weird, with all invaders worth two until they drop a level, after which they're worth four, with the Mystery Ship notching 18 points. There are 12 variations compared to the 112 of its VCS predecessor (bomb speed, number of lives and straight or diagonal bombs), but it's a fascinating twist on the original.



1980
SPACE INVADERS II (ARCADE)



This extremely odd, little-documented US-only Midway release is an even more lost version of *Space Invaders* than *Deluxe*; it's just slightly less great. Only released in cocktail-table format, it's designed as a two-player head-to-head battle (though there is a CPU-opponent option). Each player has their own formation of 33 invaders (each side is assailed by different kinds of invader), which attack as normal, but the object of the game isn't to defeat the invaders but to score higher than your opponent. The best way of doing that, of course, is to cut a path through the invaders, use it to destroy your opponent's Laser Bases, and then safely rack up the points while he sits there helpless with no lives left. Mystery Ships crisscross the screen leaving trails of reinforcements in their wake (two complete rows per player, per level, restoring the original's complement of 55 invaders to a wave), and it's a game of relentless fast action, which is generally over in a minute or two. Strangely, in versus CPU mode the enemy player has no invaders to worry about, shooting at you from an empty screen, and the game basically becomes a more intense version of normal *Invaders* with an extra source of incoming fire to worry about.



» If you clear a wave of invaders, the next one starts with your Laser Base pushed about an inch higher up the screen, which is a powerful incentive to get on with killing your opponent, not harvesting invaders for points.





1982
SPACE INVADERS (ATARI 5200)



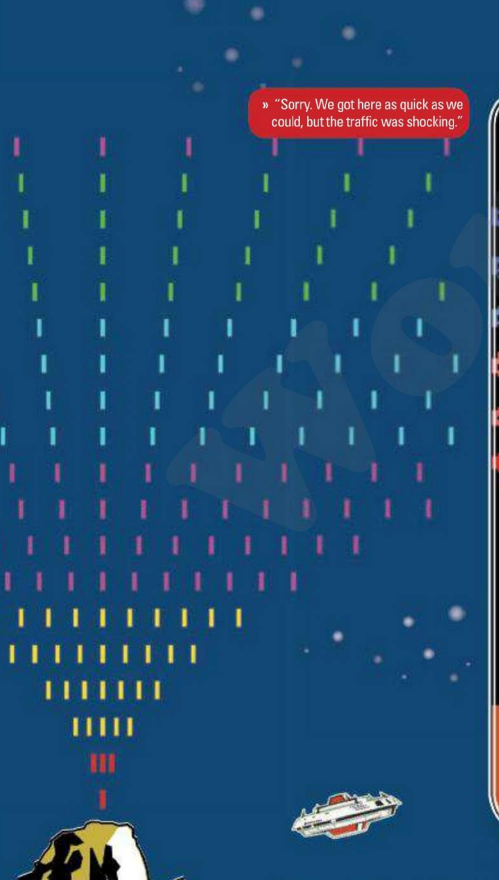
At first glance, *Space Invaders* on the next-generation VCS follow-up, the Atari 5200, looks a lot like a port of the Atari 400/800 computer version (to whose internal hardware the 5200 was largely identical). However, Eighties' Atari wasn't anything like that predictable. Offering 12 variations again, this was another radical remix, which started off by taking away the rocketship and restoring your defence bunkers (of which you got three, as with the VCS game), with the catch that the bunkers no longer got rebuilt at the start of each level. The invaders marched slowly onto the empty screen from the left-hand edge, and at first the game plays much like its immediate predecessor, with the invaders again only permitted a single bomb at a time. After the first two waves, though, things start to get crazy.

Level 3 changes the graphics of all the invaders, and introduces bottom-row invaders that dodge rhythmically from side to side. Level five removes them again, but makes the two middle rows so dark they're almost invisible (bombs are once more the colours of the invader that dropped them, so they can also be near invisible). Level 7 makes all invaders shades of the same colour, and they intermittently change colour and form, including to the very dark, barely visible colours. (Scores for these invaders change with their form, and appear to be variously 10, 15 or 20.) After Level 7 there is yet another flashing red Mystery Ship kidnap, but after this one your bunkers are rebuilt and the invaders go back to their highest point for the beginning of Level 8.

The invaders never change form again after Level 7, but they do get lower each wave and are reset to the high point again after Level 14. Scoring is like the 400/800 version, in that invaders' scores double during the level (this time it's when you've shot half of the invaders in a wave), but scores also double with each change of invader form. So for example, on Level 1 invaders are two and then four points, on Level 3 they're four and eight points, and on Level 5 they're eight and 16 points. (The Mystery Ship gets some of its mystery back, and can be 10, 20, 30 or 60 points, depending on which number of shot you hit it on. It appears much more frequently than in the 800 game, and always in a cycle of once from the left then twice from the right for some reason.)

Working around the limitations imposed by the hardware, the 5200 game is an imaginative and extremely challenging *Invaders*, and a very different experience from any of its predecessors. It's well worth hunting down.





» "Sorry. We got here as quick as we could, but the traffic was shocking."



The Definitive SPACE INVADERS



» This distinctive circling-invaders formation would go on to make an almost-unchanged reappearance in *SSI91*.



1985
RETURN OF THE INVADERS (ARCADE)

After a frenzy of activity and invention in its first four years, *Space Invaders* took 1984 off to go InterRailing around Europe, and returned afresh to the arcades the following summer, with a release that would signpost the future of the series. Now clearly identifiable as the missing link between the 1979 original and the 1991 sequel that would finally bring the *Invaders* name back to prominence (more on that one later), *Return Of The Invaders* is a garish-looking but subtly honed evolution that frees the invaders from their rigid 90-degree movement patterns and thereby opens up worlds of new possibilities. (Interestingly, apart from the name, the only acknowledgement that *Return Of The Invaders* is part of the *Space Invaders* canon is the appearance of the original invaders on the high-score entry screen.)

Despite the introduction of some basic power-ups dropped when you shoot the Mystery Ship (multiple shots, fireball shots) it's still quite a limited game in itself and it gets very hard, very quickly (although almost uniquely, the arcade board has a dipswitch enabling an invincibility cheat, which turns it into an intriguing battle against invasion). Therefore, its curiosity value holds up rather better today than its gameplay qualities. It's fascinating, though, to observe the elements that Taito decided to carry forward and those it decided to throw away.



1990
SPACE INVADERS FUKKATSU NO HI [TRANS: DAY OF RESURRECTION] (PC-ENGINE)

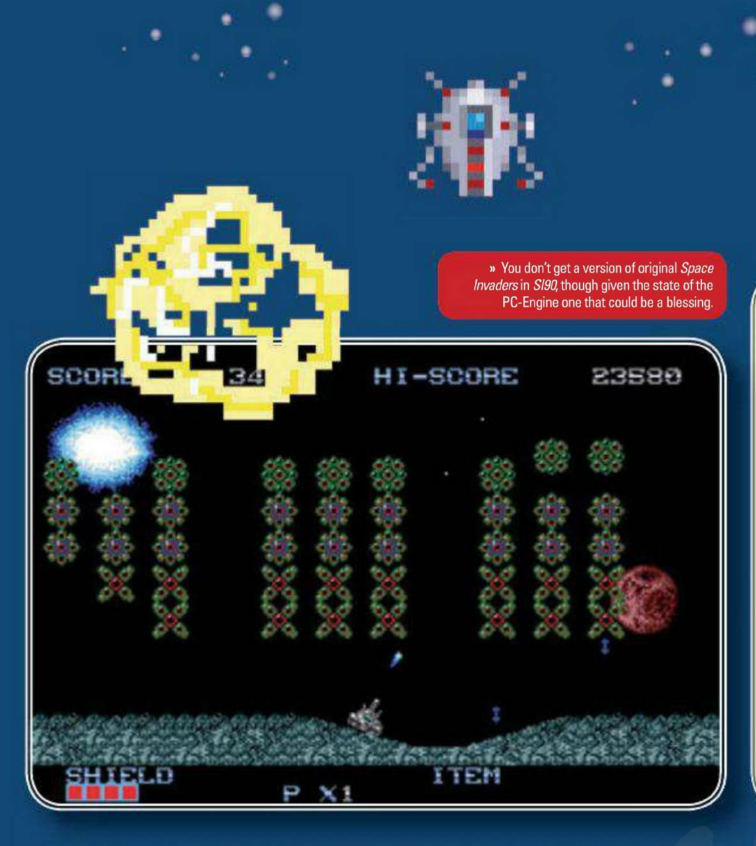
The first sequel to include both 'classic' and remake versions, the port of original *SI* here is almost as terrible as the 1985 NES port, but you also get *Space Invaders Plus Version*, which is clearly the other parent (along with *Return Of The Invaders*) of *Super Space Invaders 91*. In fact, *Day Of Resurrection* marked a pivotal point in *SI* history because it was the first time since *Deluxe* a decade previously – and the first time ever in a home-format sequel – that Taito had woken up to the iconic value of the original invader designs, bringing them back for the opening waves.

As with the Atari 400/800 game you get no bunkers to protect you from them, although later levels feature indestructible obstacles, which block shots in both directions (the invaders themselves can pass over the obstacles). The Mystery Ship sometimes drops power-ups, including homing shots and a high airbursting missile attack that can wipe out half a wave. While the invaders are restricted to left-right-down manoeuvres again, many other features from later games debuted in *Day Of Resurrection*, including the 'Buster Laser' and 'Time Stop' power-ups, and the ship designs that would be later seen in *SSI91*. The game rapidly becomes very intense (not least due to the invaders' new 45-degree two-way bombs supplementing their normal fire, assailing you from three directions at once), and your six continues will disappear alarmingly quickly, but you'll come back for more of this fast, exciting update.

» Cutely, your Laser Base now leaves tank tracks along the ground.







» You don't get a version of original *Space Invaders* in *SI90*, though given the state of the PC-Engine one that could be a blessing.

1990
SPACE INVADERS 90 AKA SPACE INVADERS 91 (MEGA DRIVE)

In a messy bit of naming, the Western releases of this sequel came out so much later that the name was changed from the Japanese original title of *Space Invaders 90* to one that would shortly cause considerable confusion with a completely different game. Despite several similarities to *Day Of Resurrection* (pairs-of-levels structure, no bunkers, three-way invader fire), this is a whole new game again with all-new levels, and even though it ran on more advanced hardware it's an uglier one, with some inappropriately jaunty music. It has lots of imaginative features (like an invader that mimics the Mystery Ship's movement along the top of the screen, but if shot, drops to ground level and exerts a tractor beam on you for the rest of the wave, defence bunkers that fall to the ground and block your movement if you shoot them, and stages with craters that affect the angle of your shots), but basically it's the same concept as the PC-Engine game but executed slightly less well.







» Extra special thanks to Luke Wells of Arcade UK (www.arcadeuk.com) for pics and info on *Prize Space Invaders*. Visit Arcade UK for all your arcade-machine needs.



1990
PRIZE SPACE INVADERS (ARCADE)

Around the start of the Nineties there was a brief vogue for 'Skill With Prizes' versions of some classic videogames, where good scores actually won you money (*Prize Space Invaders* had a maximum £20 jackpot, for example). The only two to enjoy anything approaching success were *Tetris* and *Space Invaders*, released by well-known UK fruit machine company BWB. The games were extremely hard, ramping up the speed and difficulty quickly in order to relieve punters of their cash before they could win a prize (in *PSI* you could only collect your winnings at the end of a wave, and if you decided to play on to win more and died, you lost the lot), but interestingly you could also choose to play just for fun, which cost 30p rather than the 50p for a prize game. Either way, you'd encounter a game based on *Part II*, complete with 'Splitters' and 'Breathers' and reinforcements, but with the addition of invaders requiring multiple hits and a whole bunch of new UFOs that were the main point source. A truly hardcore collector's item.









1990
SPACE INVADERS (GAME BOY)



The first version of *Space Invaders* for the mono-GB, released only in Japan, is a rotten port with inverted colours (black invaders on a yellow background – ick) and particularly dreadful sound. It wouldn't merit a mention here if it weren't for versus mode. Played across the GB link cable, Versus mode is basically *Space Invaders II* with a few tweaks (no bunkers, and your opponent's invaders let your shots through), and gives the game some merit if both you and a friend were daft enough to fork out money for it.



» Each player's screen looked like *Space Invaders II* in versus-CPU mode, with the enemy's invaders not visible on your display.



» *Minivader* shows off a meta-vader. (Scrunch your eyes up a bit if you don't know what we're talking about.)

1990
MINIVADER (ARCADE)

Minivader is a really cute little obscurity. It's a test board that was sold – apparently as a legal requirement – with arcade cabinets sold in Japan. It has no sound or scoring, but is a very fast and difficult eight-round *Invaders* game that's alarmingly addictive as you fight to see what the next unique formation will be, and to clear all the levels before the speedy, non-firing invaders get to the bottom of the screen and end the game. The Mystery Ship says 'bomb' when you hit it, for no apparent reason.





1991

SUPER SPACE INVADERS 91 AKA MAJESTIC TWELVE: THE SPACE INVADERS PART IV (ARCADE, MULTIPLE HOME FORMATS)

So, which one of the eight distinct *Space Invaders* games between *Part II* and this was *Part III*? Anyway, it's already time to draw Round One to a close (blimey, and there's still 16 years to go) with a watershed moment in the history of *Space Invaders*, in the shape of the game that made videogaming's grandad cool and relevant again. Taito pooled the results of its various experiments and came up with a refined blend that was fast, varied, stylish and exciting, full of classic *Invaders* atmosphere (helped by repeated cameos from the original invaders, and more crucially the return of the original sound effects). Yet it was unmistakeably modern at the same time, with high-quality graphics and sound, power-ups and the first ever *Space Invaders* bosses. *Super Space Invaders 91* even managed to get away with breaking some of the most cardinal *SI* rules – some stages have invaders breaking formation and diving to attack the player *Galaxian* style, and for the first time being invaded no longer ends the game (it just costs you one life, with the remaining invaders reset to their starting positions).

The Western and Japanese versions of the game are significantly different. *Majestic Twelve*, the Japan release, divides the game's 43 stages into groups, with a branching structure akin to *OutRun* so that you don't have to play them all to get to the end – in fact, you only have to beat about 15 stages to see the end sequence of *MJ12*, whereas with the Western *SSI91* release to have to clear all 43 one after the other. The game can also be set to allow two players simultaneously, or have players alternate in the traditional 1979 *Space Invaders* style.

Both games share one mystery, though, and it's not the Mystery Ship. The advertising flyers for both versions depict and mention a second type of bonus stage in addition to the 'Cattle Mutilation' rounds, taking place against a time limit, with a boss partially obscured by columns, which, presumably, you have to fly through. Supposedly, hitting the columns cost you time, and beating the boss before the limit added the remaining time to your score as points. This section, however, doesn't appear anywhere in either version of the finished coin-op – you can play all the way through to the end, even without losing a life, and you never get a 3D boss battle. Evidently it was pulled from the game at the last minute, and the proper 'Director's Cut' version of *SSI91* has been lost to videogaming history forever. Or has it? Turn to page 156 to find out.

» Here's a detail of the *SSI91* flyer, showing the supposed 3D bonus section. If only we could play it, eh?

THE MAKING OF...

INDIANA JONES and the FATE of ATLANTIS

Nazis? Check. Sassy but gorgeous, female sidekick? Check. Globetrotting plot involving mysterious ancient supernatural MacGuffin? Check. They don't make 'em like this any more... Mike Bevan speaks to Atlantis project leader Hal Barwood about the creation of the ultimate whip-crackin' Indy adventure game

Hal Barwood is, in every sense of the phrase, a Renaissance man. Cutting his teeth as a Hollywood scriptwriter, he penned contributions to the likes of Spielberg's *The Sugarland Express* and *Close Encounters Of The Third Kind*. (The landing location of the alien mothership at the film's finale, the iconic Devils Tower, was his suggestion. His reward? A small cameo as one of the pilots of long-lost Flight 19.) In his role as producer on the Disney movie *Dragonslayer*, which he also co-scripted, he created a perennial cult favourite of many fantasy fans. And he even found a little time to put together a few games for LucasArts featuring the 'Man In The Hat'.

"I'm an old friend of George Lucas," begins Hal. "We went to film school together, and he knew of my interest in games way back in the early Eighties, when Lucasfilm Games was forming. He introduced me to Steve Arnold, who ran the Games Group for several years, and I started to hang around the company. I met David Fox, Ron Gilbert and Noah Falstein during that period. These guys worked hard as a triumvirate to produce the first Lucasfilm licensed property ever, *Indiana Jones And The Last Crusade* – a wonderful game based on the last *Jones* movie, and a sizeable hit." When *Last Crusade* wrapped, the LucasArts team fragmented and moved on to other things, so when the decision was made to create an Indy adventure sequel the door fell open for Hal. "They all had other projects they wanted to pursue," he explains. "David wanted to move over into public space interactive attractions, Ron was busy on *Monkey Island*, and Noah was starting out on *The Dig*. They needed someone to rescue them from *Jones*, and they picked me."

Hal's proven scriptwriting background was an obvious advantage when it came to producing a traditional graphic adventure. Coupled with his avid interest in gaming – he'd once driven 200 miles for a game of *Computer Space* – he suited the project perfectly. "I had been designing 'paper games' since I was a kid," reveals Hal, "and I had taught myself assembly language and built a flawed but elaborate RPG/action-adventure game on the Apple II platform on my own. So I sort of knew what I was getting into, and sort of knew what I was doing."

IN THE KNOW



» **PUBLISHER:** LUCASARTS
» **DEVELOPER:** IN-HOUSE
» **RELEASED:** 1992
» **PLATFORMS:** PC (PICTURED) AMIGA, MAC, FM TOWN MARTY
» **GENRE:** GRAPHIC ADVENTURE
» **EXPECT TO PAY:** £5-£10



» Two guesses how well this request goes down with the doorman.



» At least they're doing their bit for global warming.

The as-yet-untitled sequel to *Last Crusade* would, of course, become *The Fate Of Atlantis*, popularly hailed as the greatest *Indiana Jones* computer game of all time, as well as one of the most respected of LucasArts' 'classic' graphic adventures. The game perfectly captures the spirit of the three existing *Indy* movies, while offering an original premise that stands up surprisingly well in comparison to those of the films. Indy's frantic race against the Nazis to discover the whereabouts, and potentially lethal secrets, of the long-lost civilisation of Atlantis, accompanied by the beautiful but infuriating spiritualist Sophia Hapgood, is a masterful piece of storytelling, and a spellbinding adventure.

"FATE OF ATLANTIS'S ALTERNATIVE TAKE ON A CLASSIC MYTHOLOGY, WITH AN ADDED SPRINKLING OF HISTORICAL FACT, CREATES A BEGUILING QUEST"

Like the films, *Fate Of Atlantis*'s alternative take on a classic mythology, with an added sprinkling of historical fact – the sub-quest for the Lost Dialogue of Plato, as the Greek scholar did indeed describe Atlantis in some detail – creates a beguiling quest for the heroic archaeologist and his beau. "*Jones* adventures take place in an exaggerated version of the real world, with plenty of legitimate references to the treasures of antiquity," acknowledges Hal. "It's easy to run out of actual historical places and artefacts, but Atlantis is at least a 'real' myth – it all started with Plato, so its pedigree is perfect."

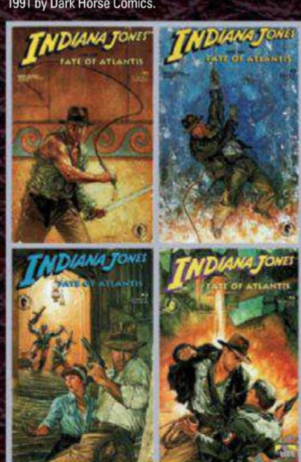
The fact that, in the absence of any new Indy movies to base a game on after *Last Crusade*, Hal was ultimately given free rein – and a helping hand, when available, from Noah Falstein – to create an original story would contribute greatly to his affinity for the project as it evolved. To begin with, however, a recently rejected *Indiana Jones* film script by Chris Columbus, writer of *Gremlins* and *The Goonies*, was proposed as the basis of the plot. The narrative would have taken Indy to Africa in pursuit of a number of long-vanished Chinese artefacts, hardly the strongest story idea the franchise had ever seen. "When I signed up, it was on the understanding that I would develop a game based on an unproduced *Indy* script," explains Hal. "But after reading it I decided it was unproduced for a reason, and wanted something else. I don't think anyone already inside the company was all that enthusiastic about the script either, but I'm the one who said the emperor lacked clothes. Anyway, Noah and I strolled over to George's well-supplied research library, pulled out some cheap coffee-table book on the world's unsolved mysteries and spotted a diagram of Atlantis. The city, we were informed, according to such an august authority as Plato, was divided into three concentric rings. The layout just shouted, 'I want to be a game!' and we agreed."

And like all good yarns based loosely on historical fact, a great deal of further, detailed research was necessary to flesh out the story in a convincing manner. Hal and Noah would spend many hours poring over theories and explanations of the Atlantean legends in the library at Skywalker Ranch, while assembling the lengthy script for the game. "Plato mentions Atlantis in a couple of his 'dialogues', and I came up with the notion of another work by Plato, lost to history, that detailed the place," says Hal. "It was hard slogging to get through some of the crackpot ideas about Atlantis, but on the whole it was great fun."

During the research sessions Hal would learn about the semi-precious alloy orichalcum, supposedly invented by the Atlanteans, which would become the basis of Indy's competitive rivalry with the Nazi powers. It also fell to Hal to conceive of the game's evocative title, which slots wonderfully well into the *Indiana Jones* universe. "The guy who ran the company just had no feeling for this sort of thing," he says, "and just wanted to call it, '*Indy's Next Adventure*', but thankfully he and his marketing group eventually came around. I've always thought there's something classy about the title that tells the potential player, 'Hey, this will be good'."

There there was the small but critical concern of keeping continuity within the confines of the *Indiana Jones* universe for the game's plot, as well as the obvious need to instil the final product with an authentic feel of 'Indy-ness'. "There was a timeline bible meant for authors who wrote *Jones* comic books

» A four-part comic adaptation based on the game's script was published between March and September 1991 by Dark Horse Comics.



» Doctor Heimdall in Iceland is a few snowflakes short of a cone.



THE MAKING OF...
INDIANA JONES AND THE FATE OF ATLANTIS

ATLANTIS – MYTH OR HISTORY?

Ever since the Greek scholar Plato described Atlantis in his two 'dialogues', writers and historians have argued about the possible location of the legendary 'lost continent'. Some placed it in the Atlantic, citing the Azores or the Canaries as possible candidates; others off the Pacific coast of America, in the Mediterranean Sea, and even beneath Antarctica. In an eerie mirroring of the *Fate Of Atlantis* plot, Heinrich Himmler was involved in organising a 1938 expedition to the Tibetan plateau, where Nazi theorists sought evidence of a supposed Atlantean master race.

Although Plato placed the mythical kingdom outside the Pillars of Hercules (the modern day Straits of Gibraltar), one of the strongest cases for inspiring his fables would be Thera (Santorini), a volcanic island in the Aegean Sea, some 70 miles off Crete. Sometime between the 17th Century and 15th Century BC, the island exploded in a spectacular eruption, many times more powerful than that of Krakatoa, one of the most violent eruptions of modern times. The resulting volcanic fallout, and a theorised massive tsunami, is thought to have decimated the once-mighty Minoan civilisation on nearby Crete. The eruption totally destroyed the centre of the island, and the results can be seen today in the form of a massive caldera, several miles across. Although the location of *Fate Of Atlantis*'s ringed city is never explicitly revealed, the game's plot is very much inspired by this theory, with a Mediterranean setting for Atlantis very close to Thera's real-life location.

and novels," divulges Hal. "But that was of trivial importance. The main research was done sitting on a couch watching the movies unspool on video tape."

When it came to creating the supporting characters around our Fedora-sporting protagonist, Hal's addition of Indy's glamorous ally Sophia Hapgood, along with the Nazi antagonist Klaus Kerner, rounded out the cast of the story. Sophia, possessor of a supposed Atlantean necklace, a pivotal plot device later in the game, may or may not also be under the spiritual influence of an ancient and malevolent Atlantean god. "We needed someone to unlock the story, and someone who could provide a key to its resolution," explains Hal. "Kerner and his pals served the former purpose, and Sophia, with her physical and psychic bonds to the evil Nur-Ab-Sal, provided the latter."

Not averse to a little background 'digging' ourselves, we put forward the theory that Sophia's family name might have been inspired by Charles Hapgood, an American academic who wrote and lectured on many archaeological subjects, including the possibility of the existence of a 'real-life' Atlantis. "I can't remember!" says Hal. "There was a real Hapgood who trudged through South America uncovering Mayan sites, and if that's the guy, then that's the guy." He also says that, as a writer, the character was the most enjoyable of the supporting cast to conceive. "The truth is, they were all fun, but Sophia entertained me the most. Being at cross-purposes with Indy, with a guilty secret, with psychic powers, with a sharp tongue in her mouth, she energised the story."

It's a snake. I hate snakes!
Walk to giant anaconda

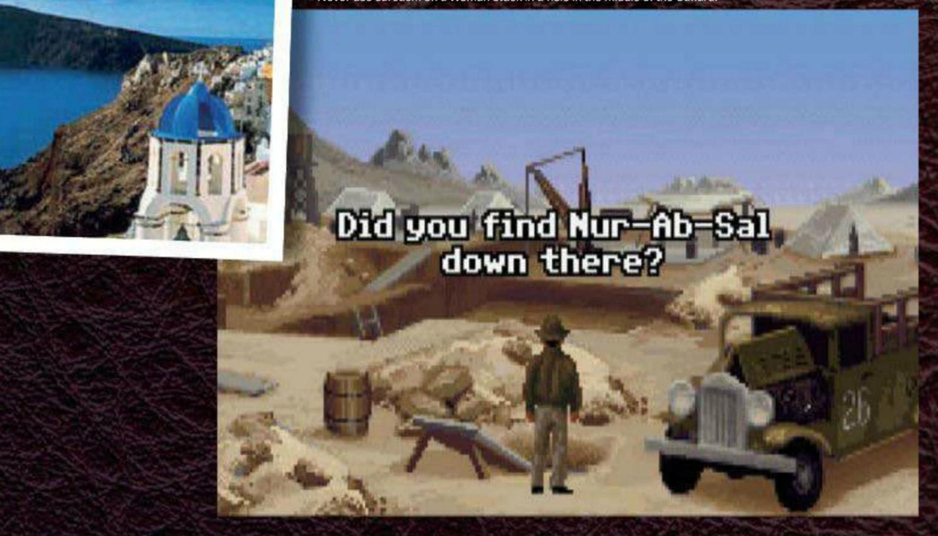
» Indy's other pet hate besides the goose-stepping bad guys.

Both LucasArts' *Indiana Jones* graphic adventures are renowned as being among the only titles in the company's adventure catalogue allowing players to actually meet a sticky end, in stark contrast, for example, to the nigh-on invulnerable Guybrush from the *Monkey Island* games. The development meeting for *Last Crusade*, between a nervous David Fox and Noah Falstein, and Indy's 'creators' Lucas and Spielberg, in which the game writers nervously asked the film-making duo if they would kindly give permission for Jones to 'die' in their game, is the stuff of legend. *Fate Of Atlantis* resurrected Indy's hard-won gaming mortality to create further tension for the player, in the spirit of the knife-edge matinee suspense of a *Jones* flick. "I just wish we had done more," admits Hal. "I would have liked a more sophisticated fighting mechanic, that's for sure. As to dying, it certainly went against the grain of the LucasArts house style, but felt right for Indy. In my mind, it's not a legitimate *Jones* yarn if he's not in mortal danger."

Fans of the game will remember that early on in the adventure, *Fate* offers a choice of three 'paths' through the main bulk of the story: Team, Fists or Wits. Depending on the player's preference – Sophia's company and hopeful co-operation, bare-knuckled action, or solo puzzle-solving – the game experience will change accordingly. Different ways of tackling puzzles and obstacles will present themselves, with the storyline and in-game dialogue being expertly adapted to each permutation of events. To gain the game's maximum IQ (Indy Quotient) score, players must complete each path in turn. Hal concedes that creating and scripting these separate 'paths' was a challenging and time-consuming process. "Noah wanted to do the three paths," explains Hal. "He knew that the adventure-game audience shrinks from twitchy gameplay, and to be true to Jones we required some fisticuffs, so he wanted nervous players to find a way to avoid the action stuff. Once we had settled on the overarching story and an outline of the paths, Noah went on to his other projects, and the details were left to me. So we found ways to vary the experience, each path with some overlap, and each path with some unique features."

"I was enthusiastic, and it took me a while to understand how much work I was in for," he continues. "Right in the middle of development, management started to get cold feet, but they never insisted on getting rid of the paths. I did do some trimming, however. The paths converge upon arrival in Atlantis. And we discovered that we should get Sophia offstage whenever possible.

» Never use sarcasm on a woman stuck in a hole in the middle of the Sahara.



FATE of ATLANTIS - the players

He's back. And this time he hasn't brought his dad. But here's a selection of some of the supporting characters from the game



Sophia Hapgood
A beautiful spiritualist with a deep interest in Atlantean matters. But is she to be trusted?



Klaus Kerner
A conceited Nazi agent who takes great pleasure in thwarting our hero at every opportunity.



Dr Hans Ubermann
The brains behind the Third Reich's plans to reactivate the lost power of Atlantis.

Dr Bjorn Heimdall
An archaeologist attempting to discover evidence of an Icelandic Atlantean outpost.

Charles Sternhart
Another seeker of Plato's Lost City. He is first encountered in the jungles of Tikal.



Philip Costa
This eccentric chap just might have some useful information on Plato's Lost Dialogue.



Omar Al-Jabbar
Owner of an Algerian antiques shop and a number of mysteriously unreliable camels.



Alain Trottier
Omar's business associate in Monte Carlo. Has a fascination with matters of the occult.

Having her follow Indy everywhere proved to be a nightmare. Too many opportunities for inane conversations, too much awkwardness in setting up stunts and so on. Getting the paths done added around six months to the project and many an all-nighter for me."

As with all LucasArts graphic adventures, the visual design was an important consideration, and Hal and his team worked tirelessly to ensure that the final product looked truly stunning. The 16-colour visuals of *Last Crusade* pale in comparison to the beautifully atmospheric hand-drawn VGA artwork of the PC version of *Fate Of Atlantis*. The epic scope of the game, with its myriad locations spanning Iceland, Guatemala, Algeria, Crete, and Atlantis itself, created a huge workload for the LucasArts graphic designers. "Our artists, Bill Eaken in particular, were good at putting together a 'Mediterranean' style, kind of like Mediterranean cuisine; a little of this, a little of that. Knossos and Mycenaean Greece were the main inspirations, but there's some Mayan stuff in there, too."

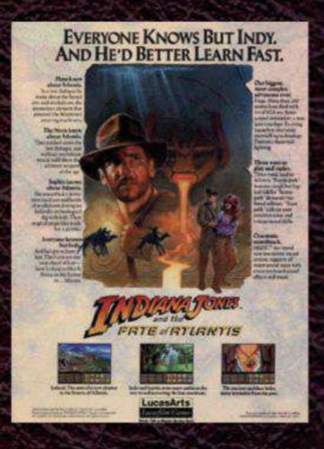
Art director Bill Eaken was also behind the game's classic box cover, inspired by the iconic artwork of the veteran movie-poster artist Drew Struzan.

From an art-direction perspective, the game would turn out to be the last of its kind for LucasArts. "I'm still irritated by the fact that we did everything right on the computer – with preliminary paper sketches, of course," acknowledges Hal. "Scanners were new and cost $5,000 back then, and company management dithered about getting the right deal until it was too late for my project. *Fate* was the last pixel-paint project at LucasArts for PCs." A massive undertaking, even by modern standards, the game's quota of around 120 separate locations and set pieces deserves credit; it's one of the largest of all the LucasArts adventures.

"FATE OF ATLANTIS RESURRECTED INDY'S HARD-WON GAMING MORTALITY TO CREATE FURTHER TENSION FOR THE PLAYER, IN THE SPIRIT OF THE KNIFE-EDGE SUSPENSE OF A JONES FLICK"

Particular standouts include the multi-screen scrolling backgrounds depicting Knossos, where Indy struggles to find the entrance to the Labyrinth with the help of a surveyor's sextant; a Saharan archeological dig site; a Nazi U-boat; and the atmospheric Lost City of the game's climax.

Fate is also notable for being the first LucasArts title to feature full rotoscoped in-game character animation. "We got out a video camera and shot Steve Purcell (the creator of *Sam & Max*) to walk and whip for Indy, and my lead animator, Collette Michaud (now Steve's wife) to do the same for Sophia,"



» Iceland: Not as cold as Sophia's comeback.

INDIANA JONES AND THE FATE OF ATLANTIS



» You'll need to tackle this 'Worldstone' puzzle at several points in the game.

"AT THE TIME OF FATE'S RELEASE, ANY NEW INDY GAME FROM LUCASFILM WAS SURE TO CREATE A CERTAIN LEVEL OF HIGH-PROFILE INTEREST FROM FANS AND THE MEDIA, ESPECIALLY WITH THE CINEMATIC RELEASE OF LAST CRUSADE STILL FRESH IN PEOPLE'S MINDS"

explains Hal. "Then we projected the frames on a screen, and Collette drew pixels over them. Crude, but effective."

Hal's role as project leader extended to overseeing all aspects of the game that made it to the floppy release, encompassing script creation and editing, game design, and art direction. In fact, pretty much the only aspect he wasn't involved in was casting and recording the voice actors for the PC CD-ROM 'talkie' version. "If it had been a movie, I would have been intimately involved. But by the time we turned it into the company's first real talkie, I was off on another project, and all the voice stuff was in other hands. Some of it is good [Doug Jones' Indy was particularly well received by fans], but it was a pioneering effort, and some of the casting and voice direction left me cold, especially the sneering attitude of the villains."

At the time of *Fate*'s release, any new *Indiana Jones* game from the Lucasfilm stable was sure to create a certain level of high-profile interest from fans and the media, especially with the cinematic release of *Last Crusade* still fresh in people's minds. But with a completely original premise rather than a direct film licence, was Hal ever worried about matching the popularity of *Last Crusade* (the graphic adventure), or competing with in-house titles like Ron Gilbert's *Monkey Island*? "I wanted to at least equal the success of *Last Crusade*," he admits. "I wasn't worried about *Monkey Island* in the least, because it was still in production when I started, and it was a comedy game instead of a melodrama. As it happened, commercially, *Fate Of Atlantis* topped them all. By the time of *Fate* we worked in 256 colours (a first at LucasArts), could do quasi-3D movement, and *Fate* was the first fully voiced game we ever made." Indeed, a million-unit seller, the game remains one of LucasArts' most successful and best-loved graphic adventures.

We wonder how the final product compares to Hal's personal vision when he started on the project, and whether any story or game ideas ended up on the cutting-room floor, so to speak. "Endless compromises, but no cuts that I remember," says Hal. "We were changing publishers as *Fate* neared the finish line, and I was given a couple of months to polish and kill the last few bugs, an opportunity I cherish and never had again." With regards to the finished product, Hal still has a healthy degree of respect for *Fate Of Atlantis*,

INDIANA JONES and the VIDEOGAMING ODYSSEY

Selected highlights from the gaming archives of the 'original' tomb raider



RAIDERS OF THE LOST ARK (1982) Atari 2600

Howard Warshaw's VCS version of the quintessential *Indy* flick may look laughable these days, but it was one of the earliest successful film-licensed games, and this binary quest for the Lost Ark was a well-received hit. For Howard, *Raiders* was a mixed blessing. It impressed Steven Spielberg enough to request he adapt an *ET* videogame, and the rest, sadly for Atari, is history…



INDIANA JONES AND THE TEMPLE OF DOOM (1985) Arcade

Atari's first and only *Jones* arcade licence is best remembered for its re-creation of the movie's mine-cart chase sequence. The rest of the game is a simplistic but fun platformer that sees Indy rescuing kidnapped children, retrieving the Sankara Stones, and crossing the perilous rope bridge for the showdown with the evil Mola Ram.



INDIANA JONES AND THE LAST CRUSADE: THE GRAPHIC ADVENTURE (1989) Various

The first LucasArts *Jones* adventure is a great example of how to nail down a licence. Developed in tandem with the film, which it lovingly re-creates, it also includes a few scenes that didn't make the movie, such as a chase through the scaffolds of the Zeppelin. It's not perfect, but it's a darn sight better than the *Last Crusade* action game…



INDIANA JONES' GREATEST ADVENTURES (1994) SNES

Similar in style to the *Super Star Wars* series, this game gave its developer, Factor 5, the task of condensing the entire movie trilogy into a SNES cartridge. And the results are surprisingly good, with 28 varied stages playing like a fusion of *Pitfall II* and the *Castlevania* series, while retaining much of the atmosphere of the films.



INDIANA JONES AND THE IRON PHOENIX (Unreleased)

A proposed post-war sequel to *Fate Of Atlantis*, it would have followed Indy to South America on a mission to prevent a group of Nazis resurrecting the Führer. Hal reveals that the project was canned by LucasArts when it realised that the subject matter wouldn't have gone down well in Germany, one of the company's key sales territories…



INDIANA JONES AND THE INFERNAL MACHINE (1999) PC, N64

Hal's final LucasArts *Jones* licence combined the successful *Tomb Raider* formula with its original source of inspiration, spawning an enjoyable, if flawed, 3D romp. *Infernal Machine* was Indy's first post-war gaming adventure, and its plot, featuring Soviet agents and the return of *Fate Of Atlantis*'s Sophia Hapgood, is its strongest suite.



» A sextant's-eye view of your glamorous sidekick.

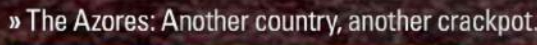
» Well it sure ain't Atlantis, but it's a start.

despite a few reservations about the obvious shortcomings of a 15-year-old game. "It's painful to look at these days, because the art for modern games has become so sophisticated, stylish and detailed," he admits. "Voice acting has likewise made huge leaps. I imagine that looking back on that period is like movie makers looking back on silent films. Historically intriguing, but painful. On the other hand, allowing for the state of the art of the time, yes, I am proud of it." We propose that the game's thoughtful plot would have made a rather good film. "I'm glad you think so," responds Hal, "but George and Steven would never consider a movie plot for *Jones* that wasn't original."

In total, the development of *Fate Of Atlantis* took around two years, from Hal's arrival at LucasArts in early 1990 to the game's release in mid 1992. Following the completion of *Fate*, Hal remained with the company, working again as a project leader on a further two *Jones* titles (*Indiana Jones And His Desktop Adventures* and *Indiana Jones And The Infernal Machine*) and the SNES action game *Big Sky Trooper*, before leaving in 2003 to revive his freelance media and game design consultancy, Finite Arts. In 2007, and to the excitement of many adventure fans, it was announced that Hal would once again be teaming up with ex-LucasArts colleague Noah Falstein, for the first time since the *Atlantis* days, and producing a new PC graphic adventure for German publisher Anaconda Games. The new game, *Mata Hari*, is based on the exploits of the infamous Dutch spy.

"Mata Hari was a Dutch beauty who made her name as a scandalous exotic dancer just about a century ago, in the years leading up to World War I," says Hal. "She became a spy, botched her assignments, was caught by the French, and executed. Because she was already notorious, and because her spying involved her womanly wiles, her sad story has reverberated down through the years. Our game proposes that she was actually such a good spy that her real exploits have never come to light. We're offering players the chance to improve on history, to perfect Mata Hari."

It's hard not to wish them well on their intimate but promising, venture to revive a much-loved, but long-thought unprofitable, genre. Although Hal admits that the new game, with its two-man script-writing team and independent publisher, can't hope to emulate big-budget productions like *Fate Of Atlantis*, the veteran duo's cumulative industry experience, and proven story-building record means they deserve another bite of the graphic-adventure apple.


» The Azores: Another country, another crackpot…



ADVENTURES IN SCREENWRITING

Lengthy stints as a player in both the games and movie industry furnished Hal Barwood with some unique insider perspective on the creative complexities of both art forms, which he is happy to share. "Movies are a heavily compressed form of drama," he explains. "Weeks or years of story get crunched down into two hours. A screenwriter must wring all the fluff out. Games are like long Russian novels: you're forced to write three or four times more dialogue. If I'm watching a movie, and I barely understand what Jones is up to or how he manages to wriggle out of some tight spot, who cares, the movie will end anyway, and I'll walk out of the theatre happy. In a game, if I fail to understand an important story point, I probably won't figure out some devilish trap and the game will never end. Players are our stars, and take on the responsibilities of the screen actors we admire."

"Making a movie can be compared to a stagecoach ride in the Old West," Hal continues. "At first you hope for a pleasant journey, but eventually you just want to get there. Building games is like that times ten. At least while making a movie you're in the company of experts. Games were – and still are – an immature form; not everyone on a team is expert at his work. Frustration is the main emotion. Another difficulty is variation. Conversations in a game can occur in multiple ways, under multiple circumstances, with multiple outcomes. Writing all that similar but different chatter that fills a game is completely unlike screenwriting, and it's damned hard work!"

SPINDIZZY

IT'S SPIN DIZZY, NOT SKIN DISEASE



- **PUBLISHER:** ELECTRIC DREAMS
- **RELEASED:** 1986
- **GENRE:** PUZZLE/PLATFORMER
- **FEATURED HARDWARE:** AMSTRAD CPC, COMMODORE 64, ZX SPECTRUM
- **EXPECT TO PAY:** £1+



HISTORY

Few games match the infuriating with the brilliant, but Paul Shirley's utterly excellent *Spindizzy* easily manages to do so.

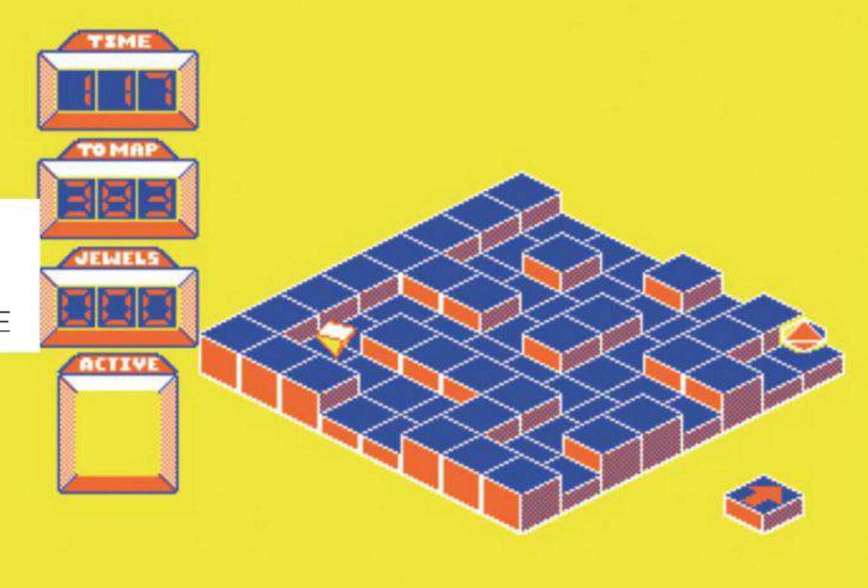
Despite its incredibly simple premise – negotiate a huge maze and acquire the 381 gems that have been placed there – its masterful level design, cunningly designed puzzles and constantly diminishing time limit meant that Shirley's creation earned an army of fans, and rightly so.

With just 107 seconds on the clock when you start your first game, you're immediately up against an insanely tight time limit, and while it's possible to earn an extra ten seconds for every gem you collect, a precious five are lost whenever you fall off *Spindizzy*'s beautifully abstract game world. And the reason for those lost seconds? Simple: Shirley's devious puzzles and GERALD's built-in inertia, which meant that as well as battling against the clock, you were constantly fighting against the harsh and irregular environment. Travel too far in one direction and it would take a little while before coming to a complete stop; fine on flat, open surfaces, but *Spindizzy*'s world was one that constantly challenged you due to its steep inclines, narrow passages and open jumps.

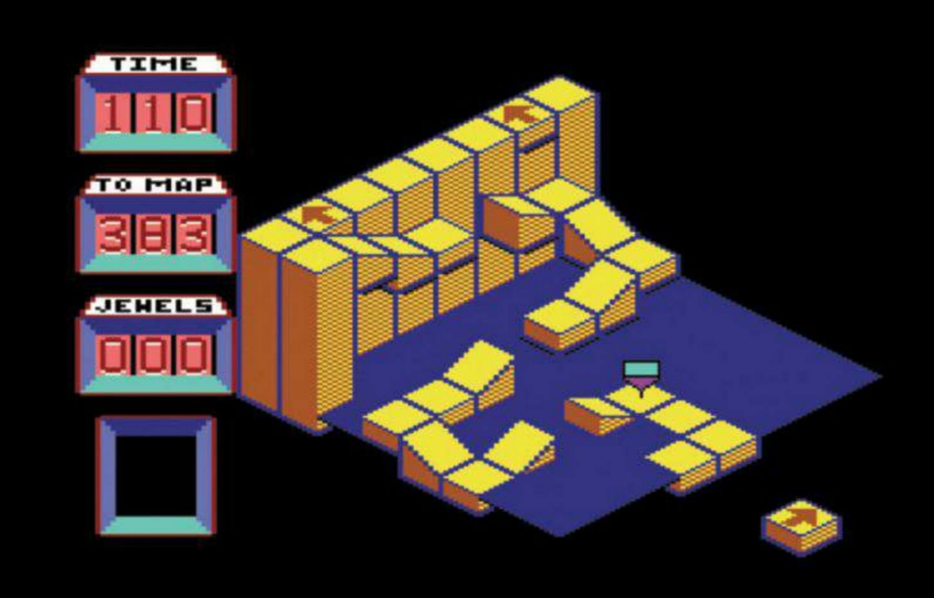
Yes, it was infuriating to begin with, but when you did career off the side of a ramp or platform it was always because of your own greed, so you could never become angry at Shirley's clever construction.

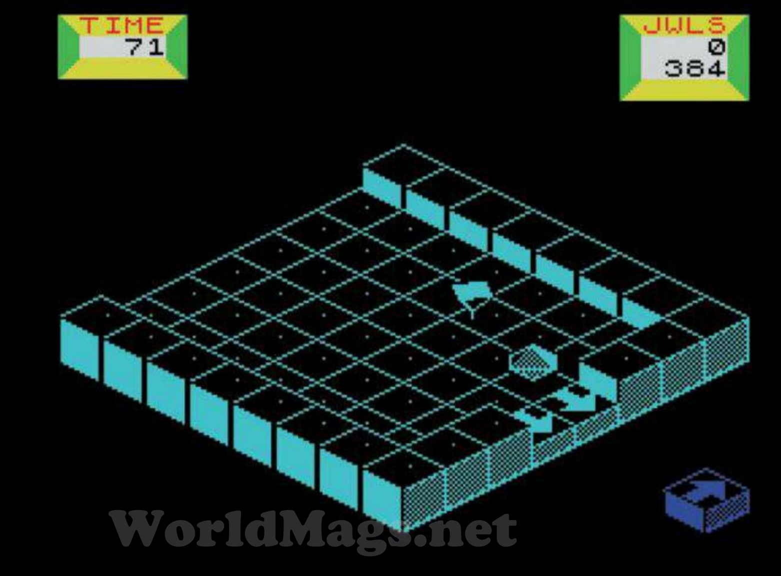
That didn't mean that plenty of swearing wouldn't ensue when a hard section had to be navigated, but the sensation of gratification you felt made those nail-biting sections more than worth it. Fortunately, GERALD (Gyroscopic Environmental Reconnaissance And Land Mapping Device) was able to change between three distinct forms, which in turn increase or decrease his momentum. As a result you'll need to flip through all three forms to complete the huge challenge Shirley set.

We may not have come close to finishing it, but that hasn't stopped us continually trying for the last two decades. A timeless classic.









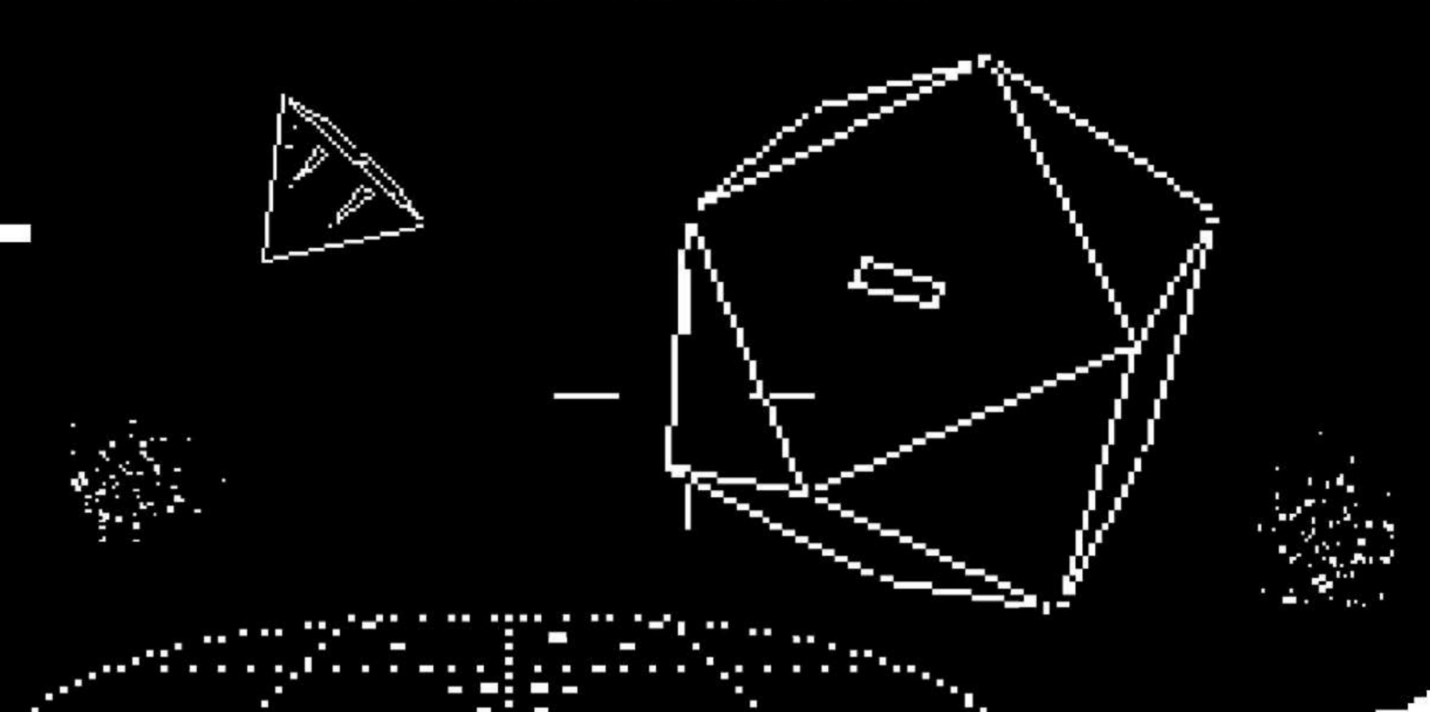

TIME
146
TO MAP
376
JEWELS
001
ACTIVE
TIME
035
TO MAP
379
JEWELS
001
JWLS
0
385
TIME
106
JWLS
0
383

THE HISTORY OF...



ELITE

IT'S ONE OF THE MOST INFLUENTIAL FRANCHISES OF ALL TIME, CAUSED A RIFT BETWEEN ITS TWO CREATORS AND BECAME SO POPULAR THAT NEARLY EVERYONE WHO OWNED AN ACORN BBC OWNED A COPY. BUT HOW DID ELITE BECOME SUCH AN ENDURING CLASSIC? DARRAN JONES SPEAKS TO CO-CREATORS DAVID BRABEN AND IAN BELL TO FIND THE ANSWERS









Space is a lot of things. To James T Kirk it was the final frontier, a place where no man had gone before; Ridley Scott saw it as a tomb where no one could hear you scream; while for others it was an annoying and distinctly average Liverpudlian indie band from the mid-Nineties. For David Braben and Ian Bell, two young 19-year-olds from Jesus College, Cambridge, space was a place where anything was potentially possible and, in 1984, they shared those possibilities with hundreds of thousands of excited gamers.

Weighing in at a hefty £17 and sporting a dictionary-sized manual, Braben and Bell's space-trading epic was certainly not for the faint-hearted. That 65-page entry to the world of *Elite* was an incredibly dense read, and covered everything from the universe's political profile, to its many alien races. Indeed, such was the intensity of Braben and Bell's vision that it even mentioned rules, regulations and details that had absolutely no bearing on *Elite*'s actual gameplay. When dealing with any alien life forms, for example, the following three rules should *always* be followed: Learn the body language of the alien race, cover up your body scent and beware of Carapace concealed weapons. These rules and many others had absolutely no relevance in the actual world of *Elite* as far as the player was concerned, and yet they helped to paint a universe that was incredibly rich in atmosphere. BioWare's *Mass Effect* was more recently praised for its in-game profiles that helped give the player a greater understanding of the worlds he was exploring, and yet a humble 8-bit release managed the same thing – some would argue, to greater effect – 23 years earlier.

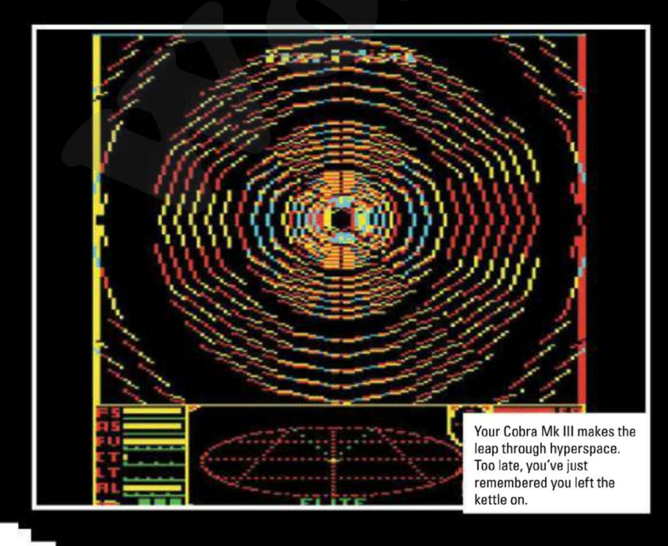
That's the real strength and beauty of *Elite*, though. It managed to offer gamers possibilities and options and created a realistic environment that felt unbelievably fresh and exciting back in 1984. Even today, though, *Elite* remains an absolute joy to play. Sure, the dynamic wire-framed ships that wowed so many gamers when they first saw them are starting to look a little rough around the edges, and the trading that turned us all into wannabe Gordon Gekkos now seems rather basic and antique, but that matters not one jot once you actually take off in your Cobra Mk III and explore *Elite*'s beautifully realised universe. It must be incredibly satisfying for Braben and Bell to know that their creation remains as fun to play as it did in 1984, and it's simply amazing to think that this entire universe could fit into a paltry 32K. That's 4K less than what we've currently written!

"I first received an Acorn Atom back before I went to university," recalls Braben about the machine that would eventually help shape his future career. Put together by Braben in 1981 – back then computers came in kits – after he received it as a Christmas present, when the Atom was finally constructed and switched on it simply said,

BASIC

>

It was all the prompting Braben needed and he quickly began to create variations of classic arcade games, with his most notable effort being based on *Missile Command* and known as *Nuclear War*. "I loaded from tape this picture I had drawn of the world on my television with a



Your Cobra Mk III makes the leap through hyperspace. Too late, you've just remembered you left the kettle on.

ELITE A-Z

A is for Adder – A single-missile-carrying craft that was manufactured by the Outworld Workshop.

B is for David Braben and Ian Bell – The two minds behind the original *Elite*. Braben went on to create *Frontier: Elite II* and *Frontier: First Encounters*.

C is for Cobra Mk III – This is the ship that is first displayed when *Elite* loads up and is also the craft you pilot.

D is for Docking – Braben and Bell had both been awed by *2001: A Space Odyssey*'s docking sequence and wanted something similar in *Elite*.

E is for Energy Bomb – This is a devastating weapon that can only be used once and is available from a planet with a Tech Level of seven or higher.

F is for Firebird – Because Braben and Bell had not sold future conversion rights to Acornsoft, Firebird ended up being the lucky publisher.

G is for Gametek – The company that published *Frontier* and *First Encounters* and was involved in a three-year lawsuit with David Braben.

H is for Robert Holdstock – Author of *The Dark Wheel* novella that was included in the original *Elite* boxset.

I is for Illuminatus – Spoof April Fool's joke about a videogame that was very similar to *Elite*.

J is for Jesus College – University of Cambridge where Braben and Bell first met.

K is for Konami – Was to be the original publisher of *Frontier* until it closed down its offices and sold to Gametek.

L is for Lawsuit – David Braben was unhappy with the way *First Encounters* was handled by Gametek and launched a lawsuit. He won it three years later.

M is for Missions – While early versions of *Elite* only contained a few missions, *Frontier* boasted over 70 different ones.

N is for Newtonian Mechanics – Both *Frontier* and *First Encounters* featured realistic physics instead of the more arcadey controls of *Elite*.

O is for Oolite – Excellent homage to *Elite* that started off life as an OpenGL Mac OS X title. It was created by Giles Williams.

P is for Procedural Generation – A way of generating algorithmically on the fly so that precious memory isn't needlessly wasted.

Q is for Questions – Ian Bell has been asked so many questions about *Elite* that he now hosts the most popular ones on his website, **www.iancgbell.clara.net**.

R is for Reptiles – Many of the spaceships in *Elite* are named after different reptiles. We were going to ask why this was but we forgot to. D'oh!

S is for Chris Sawyer – Creator of *RollerCoaster Tycoon*. He also coded *Frontier: Elite II* for the PC.

T is for Thorn EMI – The publisher that amazingly turned down *Elite* as it felt it needed a score and extra lives.

U is for Universe – The *Elite* universe contains eight galaxies, each of which contains a further 256 planets.

V is for Viper – Extremely quick spacecraft that's used by the GalCop Police Force.

W is for Wireframe – *Elite* was one of the first home computer titles to use wireframe 3D graphics.

X is for X-Rated words – Braben and Bell had to check the procedurally generated galaxy didn't contain any naughty words. They didn't find any really bad words, but they did find 'arse'.

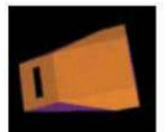
Y is for Yellow – The colour of *Elite*'s symbol. We're sure there's a better word for the letter Y, but we can't think of one.

Z is for Zieman – Creates the deflective shields that are found on the Cobra Mk III.



ROGUES' GALLERY

ALTHOUGH YOU CAN ONLY USE THE COBRA MK III, THERE ARE PLENTY OF DIFFERENT SHIPS TO BE FOUND IN THE ORIGINAL ELITE. HERE'S A QUICK GUIDE TO THE ONES THAT YOU'LL BE ENCOUNTERING ON YOUR TRAVELS



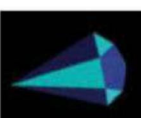
ADDER
DIMENSIONS
45/8/30 ft
CARGO CAPACITY
2 TC (Tonne Canisters)
ARMAMENTS
Ingram 1928 AZ Beam Laser; Geret Starseeker missile
MAXIMUM VELOCITY
0.24 LM (Light Mach)
INSERVICE DATE
2914 AD (Outworld Workshop)
MANOEUVRABILITY
CF 4 (Curve Factor)
CREW NUMBER
2
DRIVE MOTORS
AM 18 bi Thrust
HULL STRESS FACTOR
T Ko 28
HYPERSPACE CAPABILITY
Yes



ANACONDA
DIMENSIONS
170/60/75 ft
CARGO CAPACITY
750 TC
ARMAMENTS
Front-Fire Hassoni HiRad Pulse Laser; ColtMaster Starlasers; Geret Starseeker Missiles
MAXIMUM VELOCITY
0.14 LM
INSERVICE DATE
2856 AD (RimLiner Galactic)
MANOEUVRABILITY
CF 3
CREW NUMBER
40-72
DRIVE MOTORS
V & K 32.24 Ergmasters, with under-and-over firing tubes
HULL STRESS FACTOR
T(ensmann) Ji57 C-Holding Z22-28
HYPERSPACE CAPABILITY
Yes



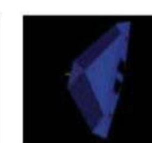
ASP MK II
DIMENSIONS
70/20/65 ft
CARGO CAPACITY
None
ARMAMENTS
Hassoni-Kruger Burst Laser; Geret Starseeker missile
MAXIMUM VELOCITY
0.40 LM
INSERVICE DATE
2878 AD (Galcop Workshops)
MANOEUVRABILITY
CF 4
CREW NUMBER
2
DRIVE MOTORS
Voltaire Whiplash HZ Pulsedrive
HULL STRESS FACTOR
TT16
HYPERSPACE CAPABILITY
Yes



BOA CLASS CRUISER
DIMENSIONS
115/60/65 ft
CARGO CAPACITY
125 TC
ARMAMENTS
Ergon Laser system; Standard JK Pulse laser; IFS Seek & Hunt missiles
MAXIMUM VELOCITY
0.24 LM
INSERVICE DATE
3017 AD (Gerege Federation Space Works)
MANOEUVRABILITY
CF 4
CREW NUMBER
15-28
DRIVE MOTORS
4 C40KV Ames Drive motors; Seeklight Thrust Systems
HULL STRESS FACTOR
T (ensmann) Yo20 C-Holding K21-31
HYPERSPACE CAPABILITY
Yes



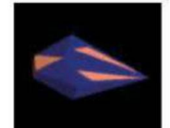
COBRA MK I
DIMENSIONS
55/15/70 ft
CARGO CAPACITY
10 TC
ARMAMENTS
Hassoni Variscan laser system and early Lance & Ferman missile system
MAXIMUM VELOCITY
0.26 LM
INSERVICE DATE
2855 AD (Paynou, Prossett and Salem)
MANOEUVRABILITY
CF 3
CREW NUMBER
1
DRIVE MOTORS
Prossett Drive
HULL STRESS FACTOR
T Ji 18
HYPERSPACE CAPABILITY
Yes



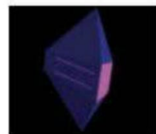
COBRA MK III
DIMENSIONS
65/30/130 ft
CARGO CAPACITY
20 TC
ARMAMENTS
Ingram laser system; Lance & Ferman Seek & Kill missile system
MAXIMUM VELOCITY
0.30 LM
INSERVICE DATE
3100 AD (Cowell & MgRath Shipyards, Lave)
MANOEUVRABILITY
CF 8
CREW NUMBER
1 or 2
DRIVE MOTORS
Kruger 'Lightfast' motors Irrikan ThruSpace
HULL STRESS FACTOR
T Ji 18 C-Holding M18
HYPERSPACE CAPABILITY
Yes



ORBIT SHUTTLES
DIMENSIONS
35/20/20 ft
CARGO CAPACITY
60 TC
ARMAMENTS
None
MAXIMUM VELOCITY
0.08 LM
INSERVICE DATE
2856 AD (Saud-Kruger Astro Design)
MANOEUVRABILITY
CF 4
CREW NUMBER
6
DRIVE MOTORS
V & K 20.20 StarMat drive
HULL STRESS FACTOR
T Ko 28
HYPERSPACE CAPABILITY
No



FER-DE-LANCE
DIMENSIONS
85/20/45 ft
CARGO CAPACITY
2 TC
ARMAMENTS
Ergan Laser System; IFS Seek & Hunt missiles
MAXIMUM VELOCITY
0.30 LM
INSERVICE DATE
3100 AD (Zorgon Petterson)
MANOEUVRABILITY
CF 5
CREW NUMBER
12
DRIVE MOTORS
Titronix Intersun Ionic for LT
HULL STRESS FACTOR
T Ji 10
HYPERSPACE CAPABILITY
Yes



GECKO
DIMENSIONS
12/40/65 ft
CARGO CAPACITY
3 TC
ARMAMENTS
Ingram 1919 A4 laser; LM Homing missile
MAXIMUM VELOCITY
0.30 LM
INSERVICE DATE
2852 AD (Ace & Faber Hullworks, Lerelace)
MANOEUVRABILITY
CF7
CREW NUMBER
1 or 2
DRIVE MOTORS
BreamPulse Light XL
HULL STRESS FACTOR
T to 48-94 C-Holding JZ20
HYPERSPACE CAPABILITY
N/A



KRAIT
DIMENSIONS
80/20/90 ft
CARGO CAPACITY
10 TC
ARMAMENTS
Ergon laser system
MAXIMUM VELOCITY
0.30 LM
INSERVICE DATE
3027 AD (deLacy ShipWorks, ININES)
MANOEUVRABILITY
CF 8
CREW NUMBER
1
DRIVE MOTORS
deLacy Spinlonic ZX 14
HULL STRESS FACTOR
C-Holding A20-B4
HYPERSPACE CAPABILITY
No



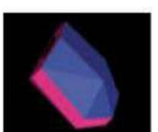
MAMBA
DIMENSIONS
55/12/65 ft
CARGO CAPACITY
10 TC
ARMAMENTS
Ergon laser
MAXIMUM VELOCITY
0.32 LM
INSERVICE DATE
3110 AD (Reorte Ship Federation)
MANOEUVRABILITY
CF 9
CREW NUMBER
1 0r 2
DRIVE MOTORS
Seeklight HV Thrust
HULL STRESS FACTOR
TKi 10 C-Holding B100+
HYPERSPACE CAPABILITY
No



MORAY STAR BOAT
DIMENSIONS
60/25/60 ft
CARGO CAPACITY
7 TC
ARMAMENTS
Geret Starseeker missile system
MAXIMUM VELOCITY
0.25 LM
INSERVICE DATE
3028 AD
MANOEUVRABILITY
CF 4
CREW NUMBER
6
DRIVE MOTORS
Turbulen Quark Re-charger Mode 1287
HULL STRESS FACTOR
T Ko 24
HYPERSPACE CAPABILITY
Yes



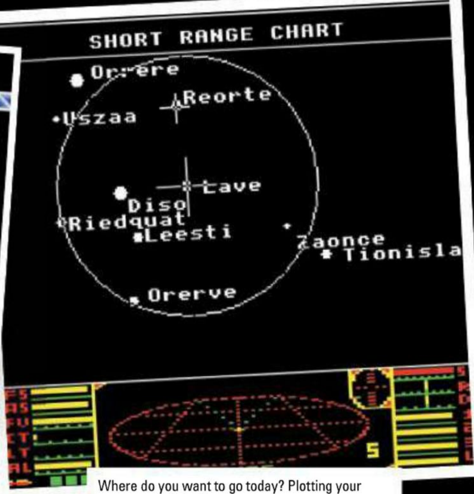
PYTHON
DIMENSIONS
130/40/80 ft
CARGO CAPACITY
100 TC
ARMAMENTS
Volt-Variscan Pulse lasers
MAXIMUM VELOCITY
0.20 LM
INSERVICE DATE
2700 AD (Whatt and Pritney ShipConstruct)
MANOEUVRABILITY
CF 3
CREW NUMBER
20-30
DRIVE MOTORS
4 C40K V Ames Drive Exlon 76NN Model
HULL STRESS FACTOR
T(ensman) YO 20 C-Holding K21-31
HYPERSPACE CAPABILITY
Yes

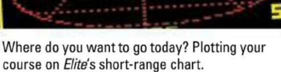


TRANSPORTER
DIMENSIONS
35/10/30 ft
CARGO CAPACITY
N/A
ARMAMENTS
N/A
MAXIMUM VELOCITY
N/A
INSERVICE DATE
Unknown, but probably pre-2500 AD. Known prototype built on SpaceLink Shipyards, Mars orbit (Old Earth)
MANOEUVRABILITY
N/A
CREW NUMBER
N/A
DRIVE MOTORS
N/A
HULL STRESS FACTOR
N/A
HYPERSPACE CAPABILITY
N/A



When the Amiga version was finally reviewed in *Zzap!64* it got a stunning 98%, the same score we gave Jeff Minter's *Space Giraffe*. The Amiga version was good, but was it that good?

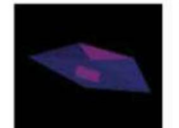




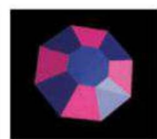
Where do you want to go today? Plotting your course on *Elite*'s short-range chart.



Due to our eagerness to take this ship down we quickly drained all the juice from our laser. We were easily picked off. A harsh lesson that was quickly learnt.



SIDEWINDER SCOUT SHIP
DIMENSIONS
35/15/65 ft
CARGO CAPACITY
None
ARMAMENTS
Dual 22-18 lasers; Seeker missiles
MAXIMUM VELOCITY
0.37 LM
INSERVICE DATE
2982 AD (Onrira Orbital/ spalder & Starblaze)
MANOEUVRABILITY
CF 9
CREW NUMBER
1
DRIVE MOTORS
deLacy Spin Ionic MV
HULL STRESS FACTOR
Not available; C-Holding C50
HYPERSPACE CAPABILITY
No



THARGOID INVASION SHIPS
DIMENSIONS
180/40/180 ft
CARGO CAPACITY
N/A
ARMAMENTS
Widely varying; Mountings available for most systems
MAXIMUM VELOCITY
0.20 LM
INSERVICE DATE
Uncertain
MANOEUVRABILITY
CF 6
CREW NUMBER
150
DRIVE MOTORS
Thargoid invention
HULL STRESS FACTOR
Uncertain
HYPERSPACE CAPABILITY
Yes

Chinagraph pencil and followed this up by drawing in all the pixels," he recalls. "The idea of the game was that you played either Russia or America and you had to keep firing missiles across at each other in this big parabolic path in order to destroy the other guy's city. The score was based on the number of deaths on the other side so it wasn't terribly politically correct, but that's how it all started."

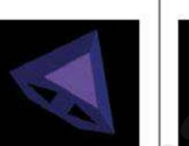
While *Nuclear War* never received a retail release, it did enable Braben to better understand the working intricacies of assembly language, which was far faster to use than BASIC and would eventually help to greatly speed up the progress of *Elite*.

Once he had fully grasped assembly language, Braben continued to muck around with various games and programs until he stumbled on something that would change his future forever. "One of the first things I programmed was an expanding star field," says Braben. "I found the 3D effects to be really quite amazing." Braben was so impressed with his creation that he quickly began to formulate a game that would eventually become the unreleased *Fighter*. "I put a spaceship in the environment and it felt okay. You shot one ship, then you shot another, then you shot another but there was no real sense of progression."

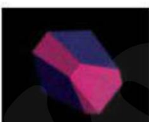
While Braben was working on *Fighter* and preparing to join Cambridge's Jesus College, another young coder was hard at work on his own space odyssey. Ian Bell was another Atom owner, and like Braben he was fascinated by the opportunities that creating games offered him. Unable to initially afford the Acorn's game pack because all his savings had gone on paying for his £120 Atom, Bell happily worked on his own creations, with his first successful effort being a translation of the popular board game *Othello*. Once he could finally afford the game pack he quickly discovered that they weren't a patch on his own creations and continued to mess around with his Atom's innards. Like Braben, Bell quickly uncovered the secrets to the Holy Grail that was assembly language and, coincidentally, he also created his own 3D space routine that would eventually morph into *Freefall*, a game he began to work on for Acornsoft. But why was Bell so intrigued with the Atom when other machines were available? "Because it was quite simply the best home microcomputer at the time," he explains.

Upon attending Jesus College, Braben and Bell quickly discovered that they shared a great many interests and that they were both working on similar home projects. "We got chatting about our space games and how demotivating it was that there was no way of regulating progression within the game," recalls Braben about one of their early conversations.

Luckily for Braben and Bell those early talks proved to be incredibly fruitful and planted the seeds that would eventually form into *Elite*. "We started to come up with all sorts of ways [to enhance progression] like, 'You could buy new parts for your spaceship', 'But where would the money come from?', 'Well, how about trading?'" continues Braben. "Our only real concern was that we were afraid it might be seen as very boring."



VIPER (POLICE SHIP)
DIMENSIONS
55/80/50 ft
CARGO CAPACITY
Zero
ARMAMENTS
Ingram MegaBlast Pulse laser; Seeker missiles
MAXIMUM VELOCITY
0.32 LM
INSERVICE DATE
2762 AD (Faulcon Manspace, Reorte)
MANOEUVRABILITY
CF 7.4
CREW NUMBER
1 (up to 10)
DRIVE MOTORS
deLacy Super Thrust VC10
HULL STRESS FACTOR
Varies
HYPERSPACE CAPABILITY
No



WORM CLASS LANDING CRAFT
DIMENSIONS
32/12/35 ft
CARGO CAPACITY
None
ARMAMENTS
Ingram Pulse laser
MAXIMUM VELOCITY
0.23 LM
INSERVICE DATE
3101 AD
MANOEUVRABILITY
CF 6
CREW NUMBER
2
DRIVE MOTORS
Seeklight HV Thrust
HULL STRESS FACTOR
T Ki 10
HYPERSPACE CAPABILITY
No

SO NEAR, YET SO FAR

THE HIGHEST FORM OF FLATTERY?

When you have a game that's as ground-breaking as *Elite*, it's inevitable that other developers will want to jump on the bandwagon and Braben and Bell's opus soon inspired a host of similar games and out-and-out clones. One such example was Gremlin's *FOFT* (*Federation Of Free Traders*) for the Amiga and Atari ST, which wasn't so much inspired by *Elite*, but ripped it off wholesale.

"It was a complete rip-off; you can't really say any more than that," begins Braben. "I guess you could see it as an honour. For example, the Electronic Arts game *Privateer* had many elements of *Elite* in it, but they at least dealt with it in a very different way. When *Federation* came out it was just blatantly the same game and it annoyed me."

Fortunately, there were a great many games out there that were prepared to try to forge their own paths, although interestingly, they've never quite managed to capture the same atmosphere. "I'm really not sure," begins Bell when we ask him why later games have never been deemed equal to *Elite*. "It was a big advance over everything else at the time. It's much harder to do that now." Braben feels differently. "To an extent they capture the atmosphere of *Elite* but they never really embrace what the concept of *Elite* is. They certainly capture elements of it, but never the whole thing. I think they do capture the wonder, though."





While *Federation Of Free Traders* (right) was seen as little more than an *Elite* rip-off, CCP's *Eve Online* (right, above) is brave enough to go off in its own direction.

THE HISTORY OF... ELITE

The ZX Spectrum has a surprisingly solid conversion, if a little slow. The conversion was handled by Torus.

Nevertheless, despite early reservations about how their future project would be perceived by others, Braben and Bell decided to join forces, with the inspiration for *Elite* coming from a variety of sources. Both undergraduates loved the docking sequence of *2001: A Space Odyssey*, while the role-playing *Traveller* featured many of the elements that would appear in the final game. It also happens to be the origin of Commander Jameson, the default pilot of *Elite*'s Cobra Mk III, should you choose to not create your own. Films and TV shows that provided inspiration included *Battlestar Galactica*, *The Hitchhiker's Guide To The Galaxy* and a certain film by George Lucas called *Star Wars*. "Although *Elite* is set in a much bleaker world than *Star Wars*, the concept of flying to completely different places was very attractive," recalls Braben. Books also proved to be a valuable source of information, especially for Bell who cites the works of such famous authors as Arthur C Clarke, Isaac Asimov, Larry Niven and Jerry Pournelle as major sources of inspiration. Then, of course, there was the majestic *Star Raiders*, an Atari 8-bit release by Doug Neubauer that was released in 1979.

One thing we were interested in knowing was how much of the two separate projects ended up appearing in *Elite*. According to Bell, few elements from *Freefall* ended up in the final product. "None really," he begins. "The truncated cube space station was reminiscent of the shape of the 2D *Freefall* space station so I called the *Elite* stations Coriolis Class after the *Freefall* space station, and Thargoid echoed the Batoids and Waspoids, but they were fundamentally disconnected games."

With their heads brimming with new ideas and possibilities, it was time to ship their idea around and see if anyone was as excited about their project as they were. Did they have any actual problems finding a publisher? "Yes we did," is Braben's somewhat expected reply. "Before I went to university I had a brief contract with a company called Thorn EMI and they offered me a job, but that would have meant me not going to university so I didn't take it. So later we approached Thorn EMI with a running, fairly final version of *Elite* – the trade, flight, dock had all been completed – and they said, "This is all very interesting, very technical, but for us to go with this, for us to actually publish it we would need a game with a score and with three lives." Essentially they wanted us to churn out what was a typical game of the time. I was a bit horrified about that and more than a little crestfallen. *Elite* was also the first game that required a tape to save to and they were like, "People aren't going to want to provide their own tapes, as that will make the game even more expensive." There was a lot of negativity there, but I also felt that they didn't really get it. Essentially, Ian and myself had written a game for ourselves, rather than thinking what's the target market, what do people want, and that's essentially how Thorn EMI left it. In contrast, we then approached Acorn [where Bell had his contract] and the difference was astonishing because they were actually gamers and they were really excited. In fact, they got other people from the office to crowd around and look at it. That contrast for us was huge so there was no question in our minds that we should go to Acorn. And besides, Thorn had rejected us so it wasn't like we had a choice."

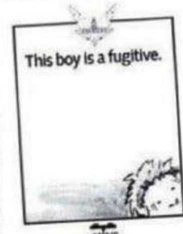
With a publisher in place, Braben and Bell continued their ambitious project. While the pair finished off *Elite*, Acornsoft began working on a huge publicity campaign, which immediately helped the incoming game to stand apart from its peers (see 'Prepare To Launch' boxout). "*Elite* took something like two years for us to fully complete," recalls Braben about its development time. "The game was actually completed long before it was released, so we were able to tweak and test it and write the manual. We didn't encounter any particular problems while working on the BBC version."

The extra time and effort allowed *Elite* to truly shine upon its eventual release in 1984, and it soon became obvious that a lot of care, attention and undeniable talent had gone into *Elite*'s conception. Originally



Considering the lack of buttons available on Nintendo's console, this is a truly impressive effort and features great graphics and a solid control system.

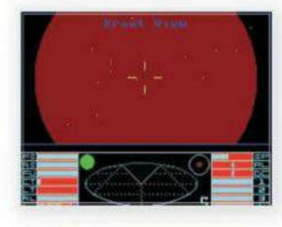








Firebird's classic advertising is instantly recognisable and sums up *Elite* perfectly. Oh, and if anyone's interested, Braben's favourite profession is a bounty hunter, while Bell prefers to trade dangerous routes.











NOTABLE CONVERSIONS OF ELITE

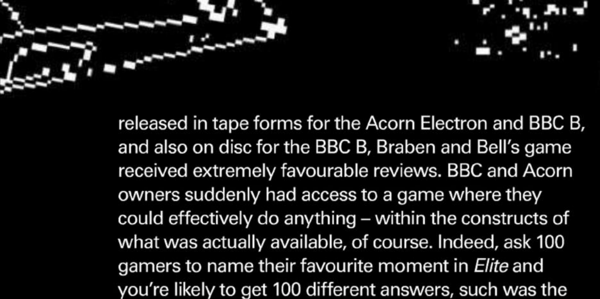
AMSTRAD CPC 464
Being huge fans of Amstrad's machine we'd love to say it's the best version of the lot, but that would be telling porky pies of the highest order. It's certainly an adequate conversion, and the included rendition of the *Blue Danube Waltz* isn't too ear jarring, but it's far too slow to actually play through. It also lacks a couple of the ships – Transporter and Anaconda – that appeared in the original game.

NES
Playing *Elite* on a console may sound like a needlessly fiddly task, but this brilliant effort proves that the classic hit could appear on any system provided a little foresight was included. Thanks to a very intuitive menu bar, the NES version turned out to be a great success and received plenty of positive reviews upon its release. Amazingly, it never received a US release and remains one of the NES's most involving titles.

COMMODORE 64
It's a case of swings and roundabouts with this C64 version. While it runs slower than the original BBC version – sorry, it's true – it does boast a number of enhancements that didn't appear in Bell and Braben's original. There are several new missions, all the bugs have been ironed out and a new alien race called the Trumbles has been included. It's a solid effort, but we prefer the speed of the original.

ARCHIMEDES
Released in 1991, this is an astounding adaptation of *Elite* that really went to town. There were more ships than ever before; the AI had been greatly increased, while other ships would constantly participate in battles, giving you a far greater sense of immersion than ever before. If that wasn't enough, the game came with some decent freebies including a great-looking poster and ship data cards.

AMIGA
While the Atari ST version, also developed by Mr Micro, is perfectly acceptable, we've always preferred the Amiga version of *Elite*. Not only is it far smoother than its ST counterpart, it also boasts greatly improved combat, and as a result is far more exciting to play. The only thing we don't like about it – and it's the same issue with other later versions – is that everything looks too darned pretty.



released in tape forms for the Acorn Electron and BBC B, and also on disc for the BBC B, Braben and Bell's game received extremely favourable reviews. BBC and Acorn owners suddenly had access to a game where they could effectively do anything – within the constructs of what was actually available, of course. Indeed, ask 100 gamers to name their favourite moment in *Elite* and you're likely to get 100 different answers, such was the game's freedom. Sandbox gaming is a term that's freely thrown about in today's world of *Grand Theft Autos*, *Saints Rows* and *Crackdowns*, but in actuality the genre was alive and well in games like *Elite*. The industry simply didn't know the correct term.

Elite sold and sold until it actually sold around 150,000 copies for the BBC Micro, virtually the same number of machines that had apparently been sold – a stunning attach rate that today's console companies would kill for. When sales first reached 100,000, a news story ran on the BBC evening news, but this fervour of excitement was nothing compared to the frenzied bidding war that began when it became clear that publishers felt *Elite* deserved to be on other systems as well.

Back when Braben and Bell's contract for *Elite* had first been created, Acornsoft had been unable to offer the pair the high royalty rate they had asked for. Instead, the canny pair were able to keep the rights to publish the game on other systems. Some 18 months later, when *Elite* was selling like gangbusters, it had become so popular that an auction ended up being held for the rights. British Telecom's software arm, Telecomsoft eventually won the auction, which became a news story in itself, and conversions began to appear on its Firebird label. "Not giving them [Acornsoft] all the rights to the different versions proved very beneficial to us," recalls Braben. "We got a very good deal indeed."

With Telecomsoft wanting to see a return on its investment, Braben and Bell soon started to work on the various conversions. "We did a lot of the



"That's no moon, it's a space station." Actually it's a planet, but we thought the *Star Wars* reference was funny.



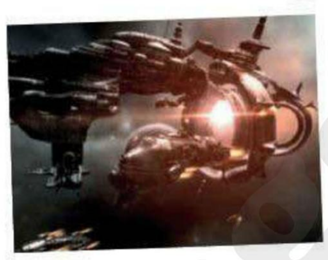
Docking could be incredibly frustrating and required plenty of practice in order to perfect it.

OFF THE BEATEN TRACK

MASTERFUL REMAKES OR COMPLETE RIP-OFFS… HERE ARE JUST A FEW OF THE GAMES THAT ELITE WENT ON TO INSPIRE



FOFT (FEDERATION OF FREE TRADERS)
Released: 1988
Systems: Amiga, Atari ST
Federation Of Free Traders certainly tries its hardest, but there's no denying that it's nothing more than a poor man's *Elite*. While the Amiga version was able to fix all the flaws that were found in the Atari ST original, its biggest oversight is that there's no real sense of progression because you can power up your ship to insane levels by simply playing the market before you've even left port. As a result *FOFT* became utterly pointless.



EVE ONLINE
Released: 2003
Systems: Windows, Mac, Linux
Seen by many gamers as a spiritual successor to *Elite*, *Eve Online* is an MMORPG set in deep space and is published and developed by CCP Games. Players can take on a variety of different professions throughout their career and can explore a universe that contains over 5,000 solar systems. Unlike similar MMORPGs, *Eve Online* does not use an experience-point system and instead opts for a system that allows for skills to grow in real-time.



FREELANCER
Released: 2003
Systems: Microsoft Windows
Freelancer's subtitle is *The Universe Of Possibility*. This is more than a little misleading, as Digital Anvil's unofficial follow-up to *Wing Commander: Privateer* lacks many of the features – automated flight manoeuvres, thousands of online players – that designer Chris Roberts originally promised. It's certainly an ambitious title and a more than worthy follow-up to *StarLancer*, but it could have arguably been so much better. One of the greatest missed opportunities of recent times.



X: BEYOND THE FRONTIER
Released: 1999
Systems: Microsoft Windows
Considering *Elite*'s age, it's amazing that it was able to get so many things right from the very off. *X: Beyond The Frontier* arrived 15 years later but still made annoying mistakes that the original space classic had neatly sidestepped. Although it featured a great sense of immersion, many gamers were frustrated with their woefully underrated ship – you started off with no weaponry – and the laughable combat that saw enemy craft do little more than ram into you.



WING COMMANDER: PRIVATEER
Released: 1993
Systems: DOS, Apple Mac
Out of all the *Wing Commander* games that are available, *Privateer* and its expansion pack, *Righteous Fire*, share the most in common with Braben and Bell's *Elite*. Taking on the role of Grayson Burrows, the player is able to land on planets and bases, jump across different star systems by using specific jump points and gets to trade with a variety of equipment, weapons and other times with numerous aliens. It's far more freewheeling than the rest of the rigidly structured *Wing Commander* series and boasts greater open-ended gameplay.

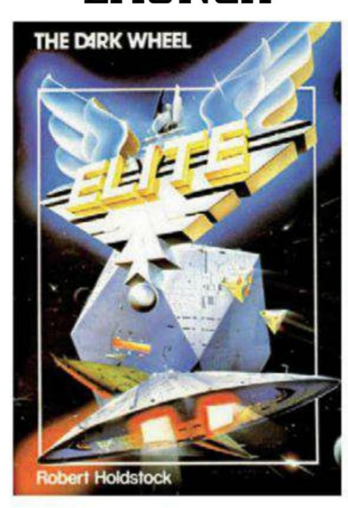
"INSPIRATION FOR ELITE CAME FROM A VARIETY OF DIFFERENT SOURCES, FROM 2001: A SPACE ODYSSEY TO STAR WARS"

ELITE





PREPARE TO LAUNCH

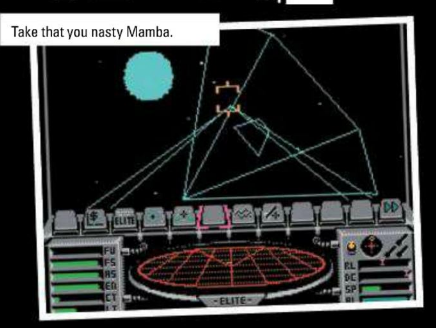


The owners at Acornsoft knew that they had something special on their hands with the incoming release of *Elite*, so they pulled out all the stops to ensure that gamers would know that they had purchased something very special.

The original release came with a ludicrous number of extras that ranged from the massive manual to a forgery-proof sepia postcard that enabled you to enter a competition to become 'Elite'. Then there was the excellent novella *The Dark Wheel*, that was found within the lavish packaging. As well as being an enjoyable read in its own right, it also acts as an entry guide to *Elite*'s world and features many elements that are in the actual game. If you don't have your own copy of *Elite*, the complete transcript for *The Dark Wheel* can be found at Ian Bell's homepage: **www.iancgbell.clara.net/elite/dkwheel.htm**.

Acornsoft's biggest masterstroke was its decision to launch *Elite* at Thorpe Park in 1984 (the world's first underground rollercoaster had just opened there). Launch parties for games were unheard of at the time and the people that attended were treated to a private unveiling by Braben and Bell, which consisted of a BBC Micro, hooked up to a huge TV. *Elite* had arrived and it wasn't taking any prisoners.

Take that you nasty Mamba.



conversions ourselves," says Braben. "We worked on the Commodore 64 conversion, the Apple II, the NES and many others, while a company called Torus did the Z80 processor versions, which included the Spectrum and the Amstrad."

While great lengths were made to ensure that these later versions were just as good as their Micro counterparts, different processors meant this wasn't always possible, and sometimes certain omissions had to be made. The Amstrad CPC port, for example, had a couple of missing ships – the Anaconda and Transport – and mission differences, while the Spectrum version was noticeably slower than its BBC counterpart. Interestingly, the Spectrum outing was also the first major release to use the Lenslock protection device, which was essentially a plastic decoding lens that was used to decrypt a hidden access code.

One thing that Bell and Braben did try to do though was to continually add new missions to later versions of the game, with a noticeable example being the Trumbles that appear in the Commodore 64 outing. Based on *Star Trek*'s tribbles, they quickly multiply until they fill your Cobra Mk III's precious cargo hold and start appearing on your craft's dashboard. They can only be destroyed by sun skimming – essentially flying close to the surface of the sun and burning them. Such were fan's devotions to the game that many of them would continue to buy later versions just so they could play the new missions that had been included.

While many of the conversions, especially the 8-bit offerings, were almost as critically acclaimed as the BBC original, special mention must go to Warren Burch and Clive Gringras's excellent Acorn Archimedes version, *ArcElite*, and Braben and Bell's very own NES conversion, which featured a brilliant and easily accessible icon strip – actually taken from *Elite*'s sequel, *Frontier* – to make up for the machine's lack of keys.

"It's really difficult to say, but I would probably say the BBC Micro one, the first one, because it was so close to my heart," explains Braben, when we ask him what his favourite version of *Elite* is. "In terms of the best to play, though, it's difficult to tell. The BBC Master version came a little bit later and was very nice because we could tweak little aspects of it and that was lovely to play. The NES version was also very good as well." Bell also has a fondness for the BBC and cites the disk version as his favourite. "It exploits the underlying machine capacity more comprehensively than the later BBC enhanced versions," is his reason. "Playing BBC 6502 Second processor *Elite* was far smoother and more colourful, but I always liked the purity of the disk version."

With *Elite* a huge hit on virtually every format it appeared on, discussion soon began to move to a sequel, but it would be a sequel that would lack the input of Bell. "After we completed all the different versions of *Elite* we essentially became 'Elited out'," says Braben. "Although Ian and myself had already started a punitive sequel to *Elite*, it didn't actually go anywhere. Ian, I think, wasn't really motivated to work any more, so we split the tasks up but it eventually became myself working on it." Bell and Braben soon parted ways and to this day they are no longer on speaking terms.

Braben still had a game to make, though, and without the input of Bell and the sheer scale of his next project, he found *Frontier: Elite II* to be a thoroughly draining experience that had a far longer development time than its predecessor. "It definitely took a lot longer to program," recalls Braben. "It was something over five years and the reason for that was because it was very much a bigger game and concept. Also, I was working on my own, Ian wasn't involved at all, so it just took a lot longer for me to do. After that I finally decided that I didn't want to do another solo project. To be honest, when I first did the graphics for *Frontier* they were truly groundbreaking, whereas by 1993 when it came out they just weren't. It was okay and still looked kind of interesting compared to other games out there but it wasn't as far ahead as it could have been. So I lost a lot of time on it."

> "WITHOUT THE INPUT OF BELL AND THE SHEER SCALE OF HIS NEXT PROJECT, BRABEN FOUND FRONTIER: ELITE II TO BE VERY DRAINING"

Another difference that Braben experienced was the tremendous pressure he found himself under from new publisher Gametek. Something he was far from happy about. "It was much more of a commercial environment," says Braben about the changing industry. "I signed with Konami, who I thought would be quite a good publisher for me, but for whatever reason they

PROCEED WITH CAUTION



When Braben and Bell first set about constructing the *Elite* universe, they wanted to create a world of limitless possibilities that would allow the player to experience a sense of freedom that no other game could offer. Frustratingly for the duo, the BBC's small memory meant that they had to find a way to make their game feel as vast as possible without compromising on the many elements they wanted to include.

The pair eventually decided to procedurally generate *Elite*'s galaxies and proudly told Acornsoft that it would contain 2^{48} (approximately 281,000,000,000,000) total galaxies. The ambitious figure was eventually dropped when Acornsoft pointed out that such a huge figure would make the artificiality of *Elite*'s universe obvious to the player and that many of the galaxies would look identical. Braben and Bell relented and dropped the number of galaxies down to a more manageable eight. With each galaxy containing 256 planets this was still an impressive figure and allowed the player to feel that they were exploring a truly gigantic world.



ELITE FOREVER

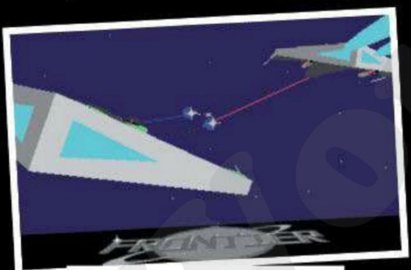
Elite's impact was notably huge with fans, but how did it affect other developers? We managed to track down a few coders of old to find out how Braben and Bell's game influenced them.

"*Elite* quickly became legendary and incredible for the 'galaxy in a box', which was a brilliant example of where people's minds filled in the many blanks," recalls Team17's Martyn Brown. "Yes, I loved it, but do recall it being quite brutally difficult, but then I was never really good at games; mostly harmless, you might say."

"The thing that struck me most with *Elite* was just how vast it was… it was the first game you could go on and on playing forever without ever getting to the end," recalls Jon Hare. "At Sensible it inspired us to start development of a 3D space game the name of which, *The Day The Universe Died*, was selected by myself and Chris from a bunch of suggestions that were sent in by readers of *Zzap!64*. We liked the name because it was so poor. Unfortunately, the game was never finished."



Due to *Frontier*'s lengthy development period its graphics were no longer cutting-edge when it was eventually released.



Combat was far trickier in *Frontier* due to its realistic physics. As a result, becoming 'Elite' required real skill.



Being able to exchange your ship for a new craft was just one of the benefits that *Frontier* offered over *Elite*.

restructured and sold their operation to a brand new company called Gametek. I hadn't heard of them and was very sceptical, so I didn't agree to the transfer, which is why Konami's name remains on the box. They did put me under pressure, which is a shame, as I don't think *Frontier* got the same love and attention that it should have done, that *Elite* did get. You know, that period from when the game is actually finished and you polish it and make it really, really slick; and I think *Frontier* suffered because of that. I think it's still a great game, it just lost out in the quality stakes."

When *Frontier* was finally released in 1993, interference from Gametek meant that the game shipped with a number of annoying bugs, something that still frustrates Braben. "It's very upsetting. It's like seeing a baby with chocolate around its face. It's not that the game isn't great, it's just that it could have been that bit better." Despite Braben's concerns about *Frontier*, the Amiga version still received impressive scores, with practically all of them being in the mid-to-high nineties, with the exception of *Amiga Power*, which awarded the 500 version 65% – ten per cent less than the faster and smoother 1200 offering.

"It just irritates me that people just want to make a point, they want to be seen and to try to get a little bit of notoriety from it," says Braben about the controversial score. "Essentially that's a reviewer not doing their job of reviewing something. They should give an honest opinion. If that was their honest opinion, then fair enough, but personally I doubt it. I just think they're trying to make a point. Similarly, though, some of the reviews were actually probably too good, dare I say it. I think there were some very high 97s, which is a great thing and I'm sort of honoured by it. I've seen a number of reviews for games like *BioShock* and it's a great game, but giving it something like ten out of ten? After you've just criticised certain elements of it? It just doesn't make sense to me."

Despite its exceptionally high scores and glowing reviews, there were elements of *Frontier* that gamers did take exception to, with the most noticeable one being combat. The arcadey nature of the original *Elite* had completely changed because Braben had created *Frontier* with Newtonian physics. As a result, controlling your ship in the middle of a frenzied dogfight could make for an incredibly frustrating experience. Braben is convinced, however, that he made the right decision; "It was less fun," he admits, but the physics did make for a far more realistic experience. Even if it did result in a few problems. "It wasn't particularly difficult to create the physics," he admits. "The problem was getting the performance and I think that's where some of the issues come from, as there were quite a few rough edges there. Not so much so in the way that it all works, but the way it transitioned between different levels of detail. It could have been cleaned up."

There may have been issues with *Frontier*, but it was also obvious from its sales (an estimated 500,000) that there were a great many gamers out there who were prepared to buy into the *Elite* franchise. After all, *Frontier* offered exciting new elements like the ability to land on planets and the opportunity to fly in a variety of different ships. Imagine what a third game could offer…

The third game was *Frontier: First Encounters* and like *Frontier* before it, it bravely pushed the envelope that had first been opened by *Elite*. Huge in scale and with the same intense realism that had divided those who

"THERE MAY HAVE BEEN ISSUES WITH FRONTIER, BUT IT STILL SOLD AN ESTIMATED 500,000 COPIES"

had played *Frontier*, it boasted vastly superior visuals – it made extensive use of texture mapping and Gouraud shading – and a new journal system that had not been seen in the franchise since the addition of *Elite*'s huge manual. Frustratingly for Braben, however, he once again faced pressure from Gametek that saw *First Encounters* being released long before it was actually ready. This time magazines were not so favourable to Braben's effort, with many of them complaining about the game's many bugs and seeing it as far from a complete product. The journals were a typical example of elements of the game that just lacked polish. "As with many things in *First Encounters*," recalls Braben, "it wasn't really fully realised."

"The real problem with *First Encounters* was that it was under an unreasonable amount of pressure," says Braben about the difficult project. "There was so much interference [from Gametek] that we offered all the money back so we could get out of the deal because I felt it was going to be a disaster. So that was a massive distraction and the game was nothing like what I wanted. As a lot of the hackers have already found out there was a lot of extra story in the game that was closed off for the final release, because part of it didn't even work. It was an accumulated thing and it eventually turned into a lawsuit, which, after a very long time I won, but that's the sort of thing that tends to get lost in the history of time. But it is a tragedy and when I say *Frontier* went out with chocolate on its face, this went out with something way worse than that. Some people will be rightly annoyed about that, but it's just one of those things and you have to put it down to experience."

First Encounters may have been something of a bitter pill to swallow for many fans of the franchise, but it still harbours moments of brilliance and it has done nothing to diminish the anticipation for a fourth trip through the *Elite* universe. "*Elite 4* will be on this generation of technology but we're not announcing it yet," is all Braben would tell us about the highly anticipated sequel. But why, after all these years, does the original *Elite* remain such a hit with gamers – it was voted as the best game of all time by **Retro Gamer** readers in issue 9. "Does it remain popular?" asks Bell. "I think people have fond memories of it the same way they have fond memories of particular TV shows they grew up with, but I don't think *Elite* is played much by kids today." Braben's opinion on *Elite*'s success is more upbeat. "It's just a nice, well-rounded treatment of the world and I think that's what makes it so attractive," continues Braben. "Looking at the games now, they look very dated but nevertheless they are still a consistent view of the world, especially if you're into astronomy and things like that. Particularly, *Frontier* and *First Encounters* are extremely interesting in the way that they present stars. I still think there's a lot of interest there."

SPECIAL THANKS TO Neil Wallis for his spaceship models and, of course, David Braben and Ian Bell.

遠くの稀で、エキゾチックなゲームを愛する人々のため

FULL OF EASTERN

BUY SOME BEERS, GET SOME FRIENDS ROUND, THEN SMASH THEM UP IN THIS ARENA FIGHTER

RAKUGAKI SHOWTIME

Treasure's sole original PlayStation title is a game most will never have played, after a mysteriously low-profile Japan-only release. Nowadays, you'll need a fair dollop of spare change to own it. So is it worth splashing the cash on this visually inventive multiplayer battle royale? Mike Bevan investigates…

IN THE KNOW



- **PUBLISHER:** TREASURE/ENIX
- **DEVELOPER:** TREASURE
- **FEATURED HARDWARE:** PLAYSTATION
- **GENRE:** ARENA FIGHTING
- **RELEASED:** 1999
- **EXPECT TO PAY:** £75-£125 (USED) £150+ (NEW/SEALED)

CAN'T IMPORT? WHY NOT TRY…

POWER STONE/POWER STONE 2 (DREAMCAST) POWER STONE COLLECTION (PSP)



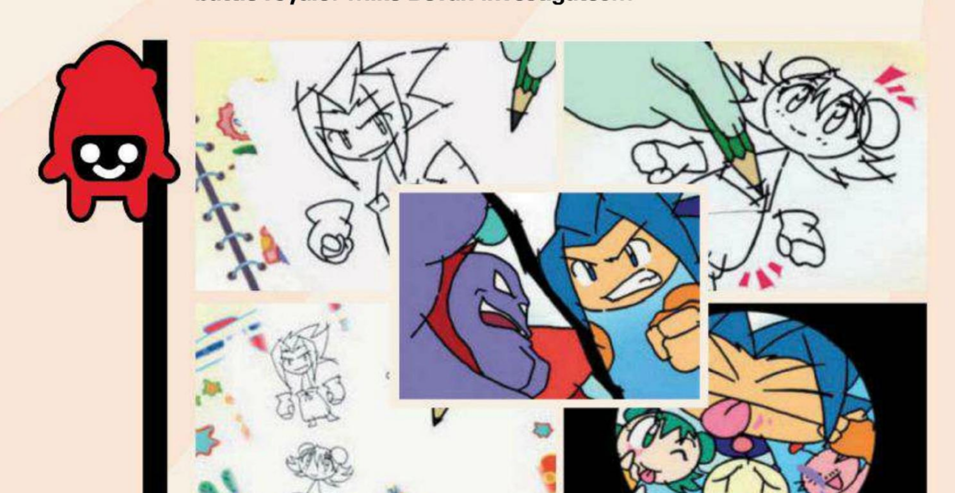
Okay – here's the thing. For the current price of a copy of *Rakugaki Showtime* you could probably pick up *Power Stone* and its sequel, as well as *Super Smash Bros Melee* and *Super Smash Bros*, along with all the consoles to play them on. Those hankering for a smattering of multiplayer four-on-four action could do a lot worse than choose one or more of the above – take your pick which games; they all come highly recommended. As far as the 'grab-it-and-throw' ethic of *Rakugaki* is concerned, the closest relatives are probably the Dreamcast's two *Power Stone* titles and Konami's *Poy Poy* on the PSone. Games bound to spruce up even the dullest party if you can source enough controllers.





SCRAPPY-DAPPY-DOODLE!

Rakagaki features an array of unlikely assailants, from the lowly grunts (Zako) to the ultimate villain, 'Big Daddy'. Other characters include a Cloud clone and Marina, from Treasure's *Mischief Makers*. They can be unlocked by playing through single-player, and are then made available for multiplayer bouts. Seasoned gamers will discover that the game adjusts its level of difficulty with accomplished play.



メガ駆動機構

Ahh… the simple joys of the arena brawler. We've all done it, haven't we? Invited over friends, plied them with alcohol and snacks and then proceeded to smack their heads in through the medium of a gaming device and televisual interface. With many of us here hopelessly addicted to the magnificent Wii outing of *Super Smash Bros*, we thought it would be a splendid idea to look back at Treasure's little-known take on the genre.



» *Rakugaki Showtime* was allegedly withdrawn from Japanese stores following a mysterious legal injunction.

Rakugaki Showtime ('Rakugaki' meaning 'scribble' or 'doodle' in Japanese) was one of two titles produced in partnership with publisher Enix, the other being *Mischief Makers* on the Nintendo 64. Like most Treasure efforts, it's a take on a well-known gaming sub-genre, which throws in a number of innovative concepts to produce a unique gaming experience. *Rakugaki*'s characters inhabit a heavily stylised game world, rendered as child-like cut-out drawings created by the omnipresent, disembodied 'God Hand'. The visuals differ from the pristine appearance of *PaRappa* or *Paper Mario*, with a much rougher look to the protagonists, as if scrawled in crayon then messily cut out of bits of paper by a five-year-old. Don't worry, though. It's a lot more endearing than it sounds.

Following Treasure's zany intro video you're offered one of four selectable characters with which to do battle. The token male and female pugilists, Yukiwo and Susami, are supplemented by a couple of diminutive Moogle-like alien critters, Pitan and Tsubohachi. A further 17 playable characters can be

GAMES FROM THE EAST WHICH NEVER MADE IT TO UK SOIL

N PROMISE



» A close-range Smiley Ball attack is pretty difficult for enemies to avoid, so it comes in very handy.



» Marina from *Mischief Makers* causes trouble in the midst of a bout with Susami.

unlocked – one at a time when beating the game in single-player. We should also mention that the in-game options are in Japanese, and the default difficulty is 'Kids' – check the FAQ at IGN.com for details of how to navigate the menus to switch this to the far more satisfying 'Normal' setting.

Rakugaki fuses the 'pick-up-and-chuck' game mechanics of *Poy Poy* and *Power Stone* with the frantic melee combat of *Smash Bros*, spawning a hilariously chaotic multi-character rumble. Bouts are played out in flat-shaded polygon arenas, which match the game's pencil-case 2D visuals well enough, and are fully rotate-able for viewing the action from any direction. The basic premise is simple – batter your opponents and wind up last man, woman or alien standing. Fallen combatants are amusingly scribbled out of existence by the God Hand, which zips around the screen pencilling in new enemies, as well as creating an endless supply of pick-up items for players to merrily hurl at each other.

These range from large boulders to ticking bombs, homing missiles, and the slow-moving but highly destructive ICBMs – the latter resulting in apocalyptic explosions, which you really don't want to be anywhere near when they hit. Another fun item is the 'black hole' which causes temporary stasis for any unfortunate combatants caught in its wake, allowing others to chortle while continuing their airborne barrage. A strategic spin offers players different 'drives' when flinging projectiles depending on whether the directional pad is held towards or away from your target. Holding towards a foe produces a fast and hard to dodge, but less powerful, attack, while holding away from an enemy lobs your offensive trinket towards them in an arc, causing huge damage should they fail to leg it from the impact area. A clever touch is that the path of incoming projectiles is shown by a cartoon arrow, giving you a notion of where they'll end up, and so where not to be standing within the next three seconds.

Most inbound projectiles can be countered and bounced back at their originator, but this is tricky, and we tend to rely on the much more straightforward tactic of running away. Thankfully, our cowardice coincides with the provision of handy 'jump points' dotted around the screen, which provide rapid transit via the 'Homing Dash'. Achieved by jumping, pushing the direction of the 'jump point' you wish to fly to, then pressing the jump button again, you'll find you can move quickly and fluidly around the arena, useful for collecting items and avoiding incoming aerial peril. With a bit of practice, by chaining a number of homing dash moves together it's possible to flit around the arena causing wanton destruction like a miniature scribbled superhero.

Melee attacks and close-combat specials are available but tricky to implement, as often you'll be too busy avoiding incoming missiles to cause intimate damage to opponents. Ultimately, the most important element in *Rakugaki* is the use of the 'Smiley Ball', which appears on the playfield like an escapee from *Berzerk*, and can cause about as much panic. Picking up and catapulting the Smiley Ball continuously will 'charge' it until it starts to shimmer. At this point anyone grabbing it will trigger a 'Hallelujah!' and become super-powerful. It's like that moment in *Power Stone* after grabbing those gems, and while everyone tries to scurry out of range of the holder's wrath, they can unleash a devastating 'Super Smiley Attack'. The resulting deluge of laser blasts and/or screen-filling detonations can decimate opponents' health, after which the Smiley Ball's charge level resets and the process starts again.

Like most games of its type, *Rakugaki* is a riot in four-player mode (via multitap) – less so, if still enjoyable, for lone players, with typical playthrough times for the 12 game stages being roughly 30-40 minutes. Given the game's scarcity, and with used copies routinely reaching silly money on eBay – they often go for over $250 – it would be hard to recommend at the price purely on its gaming merits, but as an eminently playable possible future investment? Possibly. Now if only Treasure would re-release it for the PSP…

» Susami's Super Smiley Attack causes these satisfying explosive plumes.



私を読み、私に書くことができ、私に知らせれば好みのゲームはある



DEVELOPER LOOKBACK

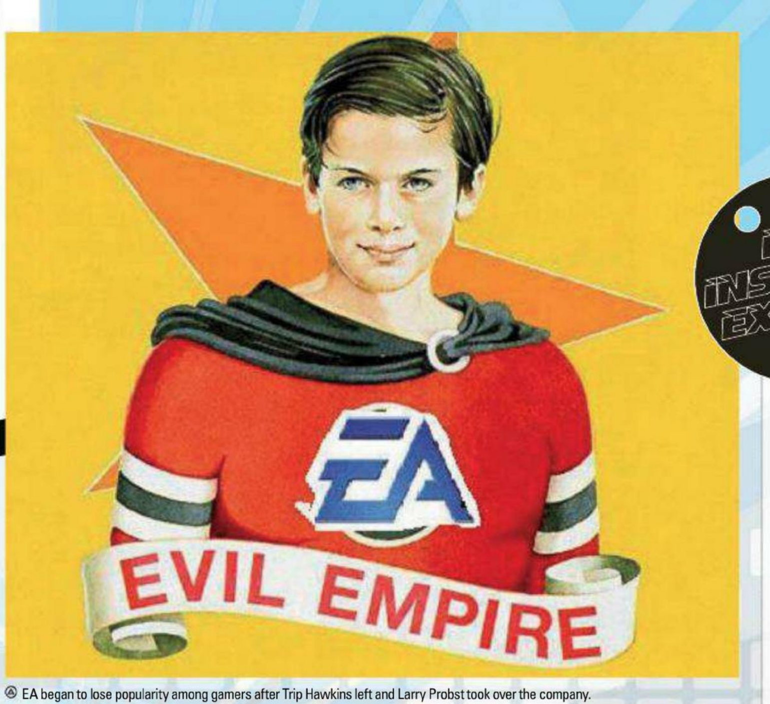
IN THE SECOND OF OUR THREE-PART SERIES, MIKE TOOLEY LOOKS AT THE EVENTS AND PEOPLE THAT TRANSFORMED EA FROM A SOFTWARE DEVELOPER AND PUBLISHER INTO AN INDUSTRY STANDARD. A COMPANY THAT WOULD CHALLENGE, AND DEFEAT, THE SUPREMACY AND TIGHTENING GRIP THAT THE JAPANESE CONSOLE MAKERS WERE WIELDING OVER AN INDUSTRY THROUGH RESTRICTIVE LICENSING AGREEMENTS

Electronic Arts (PART 2 OF 3)

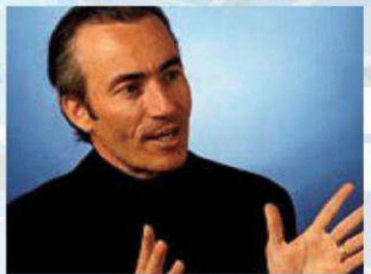
As the Eighties began to fade, gaming had started to fragment. As a term, videogame didn't cut it any more; the still embryonic industry was an eclectic mix of subsets: arcade games, home computer games and console games. Within this set were the genres that are still with us today, from sports, RPGs, shoot-'em-ups, puzzlers and platformers, through to beat-'em-ups and the RTE LaserDisc games that populated gamers' consciousness.

The heartbeat that drove this was a diverse collection of companies, run by industry veterans who had made their money from the games that they'd produced in the halcyon 8-bit days. The unstable years ahead would see many of these companies fail to adapt to the demands of a new gaming world and eventually close after incurring massive losses, largely because the guys at the top should never have been there; a great programmer is rarely a good businessman. Fortunately for Electronic Arts, it had Trip Hawkins. A shrewd operator, Trip has always had a feel for the next big thing, and this time around he had a company that was going to be a part of it.

Sega, by now, had given up on the Master System, having failed to dent the NES user base. Atari and Commodore, as always, were in a world of two, still convinced that their only competitors were each other, despite each company's ever-diminishing sales figures. Trip needed to plan the next few



EA began to lose popularity among gamers after Trip Hawkins left and Larry Probst took over the company.


Trip Hawkins, the man who started it all.


EA's one and only tennis game, *IMG International Tour Tennis*.

EA INSTANT EXPERT

Such was EA's despondency with Sega not listening to it in the early Nineties and its disappointment with the Saturn that when the Dreamcast came around it refused to support the machine. With a games catalogue that consistently frequented the top-ten charts, this turned out to be the first of many nails in the Dreamcast's coffin.

EA received the world's first online privacy seal in 1999 under the ESRB online certification programme, beating even Microsoft to the accolade.

***Ultima Online* reached** 150,000 paying subscribers within 12 months of being launched. Amazing to think that the world of online gaming was still dial-up in 1998.

In 1997 EA held an EA Sports internet tour with a top prize of $65,000 for the winner.

In 1999 EA funded the movie *Wing Commander* based on the Origin games that it had published.

EA's exclusive deal with Sega for the Mega Drive meant that it could manufacture its own cartridges; these were hallmarked by a yellow tab that contained additional memory, as early Mega Drive games didn't save progress. It also made them more difficult to pirate.

Tiger Woods originally worked as a consultant on the *PGA* games. It was during this time that Nike made him a household name with the "I'm Tiger Woods" advert, which became an institution, and so he was sponsored to endorse the game as well.

In *John Madden 1992* on the Mega Drive, OJ Simpson is in the All-Madden team. However, he has been removed from all later releases.

3DO was so biased towards developers that the manufacturers were asked to run at a loss, instead finding value in the fact that they were producing the next big thing. Matsushita didn't agree and demanded a bigger cut, which led to the enormous price tag of the 3DO.

When EA developed the tools and operating system for the 3DO it also created the world's first audio and visual CD player. It has only been equalled with the present generation.

years for EA, but in such a fragmented market it was going to be expensive to develop for so many formats.

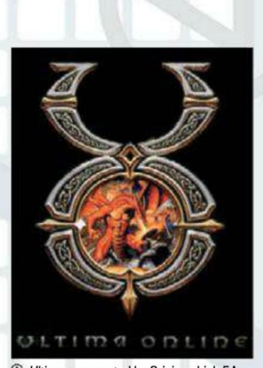
Trip explains this tumultuous period, saying: "Nintendo was a visionary and innovative company, and very principled about what they did and how and why they did it. Stubborn to a fault. Sega would basically copy Nintendo, but without any of the same convictions. Sega took advantage when Nintendo rested on their 8-bit laurels." As a footnote to this, way back in 1984 Trip had turned down the opportunity to become a Nintendo licensee. The terms offered weren't very different from the deal that Nintendo brokered to bring Rare on board; for Trip and EA, though, it wasn't enough.

The problem Trip had was that there were really only two established 16-bit systems of note in the West, and he believed in neither. While the Amiga was doing well, Commodore's future plans for the system were lacklustre to say the least. Trip had always had an apathy for Atari since his days at Apple, and to date he blames Atari's management strategy as being largely responsible for the videogame crash of the Eighties, so the ST was never seen as viable by EA. Technology was always the combustion inside EA, and with Nintendo standing firm with the NES and stating that it was in no rush to deliver a 16-bit machine, Sega and its soon to be released Mega Drive seemed to be Trip's only outlet.

Before Trip would enter into negotiations with Sega to publish for its fledgling machine, he paid heed to a lawsuit that had just played out between Nintendo and Atari and its home division, Tengen. On 12 December 1988, Atari took Nintendo to court, accusing it of having an illegal monopoly on the videogame industry. It claimed it had achieved this through illegal practices such as price fixing, monopolistic business practices and the use of computer-chip lockout technology to stop unlicensed developers selling NES games. Things would soon get out of hand in this case, with Tengen eventually being countersued by Nintendo. The disposition read: "Nintendo sues Tengen over patent violations, because Tengen, in order to bypass the licensee lockout chip, copied the 10NES program which is contained in the US CIC lockout chip. They gained this information when they were a Nintendo licensee, and using this fact tricked the US Patent Office into allowing them access to the needed data."

> "TRIP ALWAYS HAD A FEEL FOR THE NEXT BIG THING, AND THIS TIME AROUND HE HAD A COMPANY THAT WAS GOING TO BE A PART OF IT"

Sega, meanwhile, found that bringing the arcade home wasn't as easy as it thought it would be. With lacklustre launches across Japan and a less than stellar roster of games available, the attach rate was very low. Bizarrely, Trip believed in the Mega Drive – he could see a market for it and so set the EA research and development teams about reverse-engineering the machine. The R&D teams presented Trip with proposals for converting EA's existing line-up to the machine, and an evolution of EA's creation tools to allow for rapid game development. With this in mind, Trip took possibly the biggest gamble he ever would at EA; if it didn't work and Sega followed the Nintendo route, EA could lose its liquidity and freedom of choice. He directed his staff to enter into formal negotiations for a licensing deal with Sega, insisting on terms favourable



Ultima was created by Origin, which EA took over in 1992.

DEVELOPER LOOKBACK

EA GETS BUSY

Notable Acquisitions

ORIGIN SYSTEMS (1992)
In 1992 EA acquired Origin Systems, Inc, a leading computer games developer based in Austin, Texas, with net revenues of $121 million. Origin was best known for its *Ultima* series of fantasy role-playing games in personal computer diskette and CD-ROM formats. Origin would later develop the *Wing Commander* series for EA.

VICTOR MUSICAL INDUSTRIES (1992)
In September of 1992 EA formed a joint venture with Japan's Victor Musical Industries, Inc. The Tokyo-based company, called Electronic Arts Victor, Inc, translated and distributed EA's games for the Japanese market and several other Asian countries. During 1993, EA's sales in Japan increased by 140 per cent.

DISTINCTIVE SOFTWARE (1991)
Distinctive, as EA Canada, would go on to be the most prolific games maker EA had. Starting with *FIFA* and then *Need For Speed*, the team here would deliver so many key franchises that it would become integral to EA's continuing success. From *Medal Of Honor* right through to *Command & Conquer* and *SSX* it touched all of EA's great franchises.

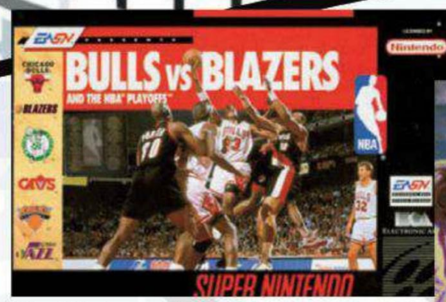
BULLFROG (1995)
While EA published Bullfrog games in the Eighties, it bought the company in the Nineties. At first Molyneux and co rose to the challenge of a global market with some of their best work, but eventually the deadlines and output became too much and Molyneux moved on. Not before he treated us all to *Magic Carpet* and *Syndicate*, though. Later Bullfrog/EA offerings were awful.

CRITERION (2004)
EA shook the gaming world when it purchased Criterion. Not only had it bought the talent that brought the *Burnout* series to the masses, it also now owned the RenderWare middleware technology that Criterion licensed to other game developers. EA had, therefore, found a way of making money out of its competitors.

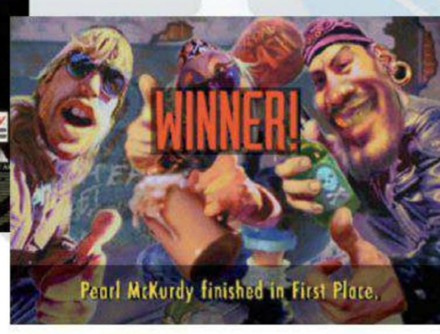
WESTWOOD STUDIOS (1998)
EA doesn't always get it right. After buying Westwood in 1998 many workers left. *Command & Conquer: Red Alert* sneaked out along with *Nox* and the MMORPG *Earth & Beyond* before EA liquidated the studio for not meeting its targets in 2003. $115 million well spent? EA still uses the IP, though.



Immercenary proved that Electronic Arts wasn't afraid to take risks. A bold release...



One of EA's releases on the SNES, most of which turned out to be weak Mega Drive ports.



Road Rash on the 3DO was utterly superb and proved to be an essential title.

to EA. EA would get to make as many games as it wanted with a reduction in the licensing fees others were paying to develop for the format. Sega said no. It planned to impose a restrictive contract on EA just as it had done with its other licensees, one that echoed the Nintendo business model. Trip had anticipated this, however, and pulled a one-two sucker punch on Sega. Acting on his direction, EA's negotiators brusquely informed Sega of America that it didn't have that kind of clout to throw around. Furthermore, EA had already reverse-engineered the console and knew how to manufacture its own unlicensed Sega cartridges and would not hesitate to do so if it couldn't support the system officially. Wanting to avoid litigation and possible brand damage, Sega softened and at the 11th hour middle ground was found between the two. Within months the first slew of EA titles started to hit the Mega Drive. EA games began to appear for the Mega Drive as fast as the company could create them, as Trip and Sega both wanted volume. The new and more sophisticated titles helped push console sales. First up were Will Harvey's *The Immortal* (an isometric-view RPG), *Budokan: The Martial Spirit* and the hastily rewritten first instalment of *John Madden Football*. *Madden* competed directly with Sega's *Joe Montana Football*, and a friendly rivalry grew between the two company's sports game divisions that would eventually result in the best 16-bit sports videogames ever created.

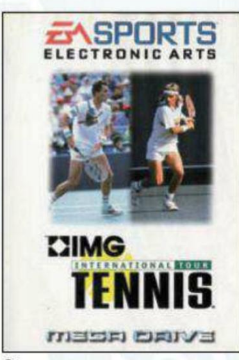
"The bottom line was that the hardware unit price came down and it opened a much larger consumer audience to videogames," says Trip. "Consoles were also simpler. You could just plug and play and only had to think about a few buttons. The big concern at the time was how Nintendo controlled everything. And going back to 8-bit when we'd been a 16-bit developer for years. I fought these issues by focusing on reverse-engineering Sega's 16-bit entry." But rarely is anything that simple. "A far bigger and tougher transition than I imagined was going from home computers to consoles," Trip continues. "Many employees found that demeaning because the Sega Mega Drive was not as powerful, there was no printer, no modem, no read/write storage, too little memory, and so on. But the Mega Drive was a mass-market machine that would sell for less than $200 and it had two joysticks so that friends could play together. It was going to be huge for our sports business for that reason. But some employees quit over this transition, and many outside artists did not want to do console work. They thought that it was beneath them," he laments.

For the next few years the Amiga and Mega Drive would receive the bulk of EA's games. With some titles being downgraded and then published under licence by Konami on the NES, the games would come thick and fast. Almost all of EA's earlier work would appear on the Mega Drive, and with annual updates to *Madden*, *Jordan vs Bird* and *Lakers Versus Celtics*, EA featured more heavily in the Mega Drive chart than Sega.

EA wasn't only about sports games, though. It would bring *Populous* and *Powermonger* to consoles, games that hitherto were seen as computer games. And while Bullfrog's star shone brightly, other EA teams were delivering the *Strike* series and *Road Rash* to enamoured gamers. *StarFlight* and other EA back-catalogue games would also make the journey onto Sega's box of tricks. EA even started to tailor games for a younger audience with *Rolo To The Rescue*. With all bases covered, it wasn't long before Nintendo came knocking. Although EA did eventually publish for the SNES, the releases were weak ports of Mega Drive games that



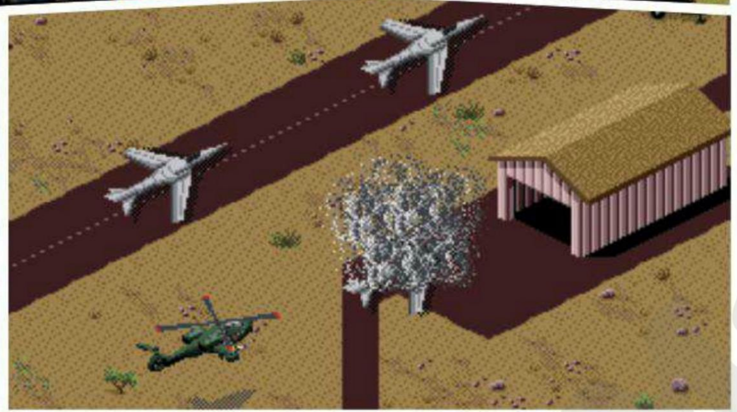
If you owned the above, you were very rich or very, very lucky.



EA's only tennis game proved to be one of its least popular sports games.

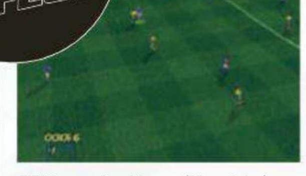






Desert Strike proved to be a great franchise and only fell out of favour when it reached the PlayStation.

THE SPORTS EFFECT



FIFA International Soccer (Mega Drive)

EA took videogame sports kicking and screaming into the 16-bit era. The first iteration of *FIFA* was more than most people had hoped for. While other football games felt like videogames, *FIFA* added real team formations and strategies to the World Cup format. Coupled with physical feel to the ball and atmospheric crowd sounds, the modern sports game was born.



John Madden Football '93 (Mega Drive)

This was the best version of the 16-bit offerings of the *John Madden* franchise. It featured greatly improved visuals and its AI meant for an all-round better gaming experience. Finally being on the defence wasn't a drag; it was on a par with attacking aspect of the game. The addition of All Madden and classic teams meant that *John Madden Football '93* was a must-have title.



NHL '98 (PSone/Saturn)

Finally, the NHL would receive the same love as football and the NFL. A completely new engine added speed to the game that had been lacking in earlier incarnations. It was the multiplayer that shone, though. The new game engine made it easier to track the on-screen action as furiously fought rivalries ensued. Only *NBA Jam* could hold a candle to its pace.



Cricket World Cup '99 (PC)

Easily the shortest lived of all the EA Sports franchises, this was actually a very good game that found only a limited audience. Realistic-looking players and pitches are home to an engrossing if slightly difficult game. More of a simulation than the rest of Electronic Arts' offerings, *Cricket World Cup '99* should not be overlooked.



Superbike World Championship (PC)

Where do you go after you bring a series like *Road Rash* to an end? Back to the source, of course. Boasting an entire re-creation of the 1997 World Superbike Championship, featuring all the details and nuances that we have come to expect from Electronic Arts, this really was a standout racer that was overlooked by all but a few.



IMG International Tour Tennis (Mega Drive)

Most people will say EA never released a tennis game, but they're wrong. Featuring 32 licensed players, the game was tough and needed much practice before you could enter a tournament successfully. Sadly, EA only had image rights for the US and a poor showing there, and an incredible price on the variable tennis licences, mean this is EA's only dalliance with the sport.

did little to push the hardware. EA and its roster of sports titles, more than any other company, had helped Sega to win vital market share from Nintendo in North America.

Trip was looking to the future, though, and two things concerned him more than anything else; how he would deal with them would shape EA's future to the present day. The artists that Trip had made stars back in the early years let ego get in the way of business as EA moved to 16-bit. As rock stars so often leave the label that broke them, the same was true of the game designers that Trip had launched, causing inner turmoil as EA moved from one format to another. Rumours were rife about the *Strike* team and *Road Rash* creators looking to go solo, leaving behind their annual updates, while Bullfrog was falling apart under the expectations of a true world market. The public, EA and Peter Molyneux all wanted different things of Bullfrog. Also, at this time, Sega had announced a CD add-on for the Mega Drive. When Trip saw it he was so underwhelmed that EA almost didn't support it at all. Discussions with Sega about a follow-up to the Mega Drive and the news that Nintendo and Sony had parted ways over a joint console proved to Trip that the console manufacturers didn't share his visions for the future of gaming.

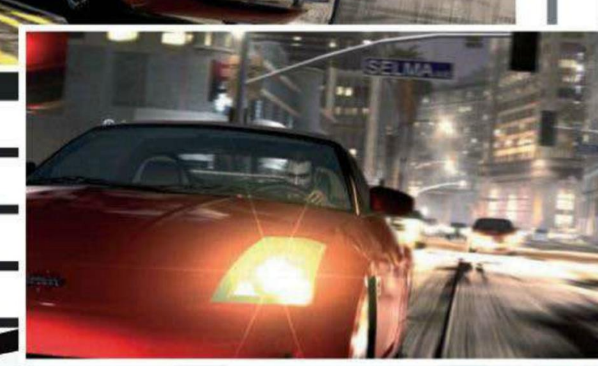
It was around this time that Trip sent Larry Probst, who was now CEO, and others from EA to scour the world for talent. This time they weren't looking for programmers; they were looking for companies to licence games from, and if the relationship was good and EA believed in the people then an eventual acquisition would happen. EA was never going to be held back by artists again; it would own the teams and, as part of EA, these companies would deliver the right game at the right time.

Undoubtedly the most significant of these new signings was Distinctive Software, bought by EA for a mere $11 million dollars in 1991; EA actually paid $785,000 and made up the balance with shares. Co-owned by Don Mattrick and Jeff Sember, Distinctive had amassed a wealth of talent and experience that saw it working for Broderbund, Mindscape and Accolade, as well as making the seminal *Hard Drivin'* for Atari. Despite the company's pedigree, Trip had other reasons for signing Distinctive. Viewing EA as a global brand, Trip was acutely aware that the world's number one sport didn't exist on the EA Sports label. After going directly to FIFA he acquired the long-term licence for international football teams, knowing that to date there wasn't a single football game from any other developer that attempted realism. Nothing could be left to chance. EA had to get this

"EA AND ITS SPORTS TITLES, MORE THAN ANY OTHER COMPANY, HELPED SEGA TO WIN VITAL MARKET SHARE FROM NINTENDO IN THE US"

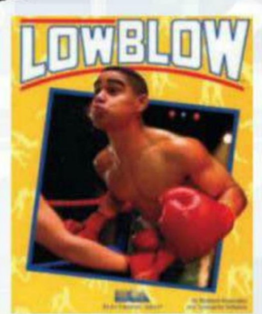
DEVELOPER LOOKBACK



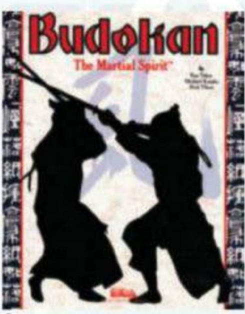


The *Need For Speed* franchise is still going strong even today.

The brilliant *Wing Commander* series was created by Origin, and was later turned into a movie that Electronic Arts helped to fund.



An EA game that hasn't remained popular.



One of EA's first Mega Drive releases.

right first time. After almost two years of development *FIFA* was released, and unusually for an EA game, the UK saw the original release. Boasting an isometric view and a more authentic feel than other games of the time it was an instant smash; *FIFA* was to football what *Madden* was to NFL. This would be Distinctive's only 16-bit title for EA. The sequels that would follow would be handled by other EA teams, while Distinctive, at Trip's bequest, started developing for an as yet unannounced new-generation 32-bit machine.

By 1992 EA had around 115 developers, internal and external. While Larry Probst would run the company, Trip steered the company into the future. It saw a 70 per cent increase in turnover after the Mega Drive deal and held the licences for the NFL, NBA, PGA and FIFA. There were other sports games, of course, but none that could compete with current rosters and endorsements of governing bodies like the EA titles. EA owned sport as far as games were concerned, and when it released the multitap adaptor hardware that allowed four-player gaming for the Mega Drive EA became unassailable for the 16-bit generation. But technology never stops evolving and Trip wasn't going to sit still. He had solved the artist problem that so hamstrung EA as it left computers for consoles, but his vision of the future of gaming didn't match that of Sega and Nintendo. As equipment became more advanced, EA pursued its Hollywood model of entertainment software publishing even further, developing even more sophisticated software. In autumn 1993, EA formed its Advanced Entertainment Group, which brought together animators, musicians, photographers, writers and filmmakers. Through this venture, live actors were filmed in Hollywood sound stages, and the videotaped performances were then digitised and integrated into the software. EA also began a joint project with Colossal Pictures, creator of the MTV show *Liquid Television*. Sega and Nintendo just didn't think like this.

Dave Needle and RJ Mical previously worked on the design team of the original Amiga and on the design of the Atari Lynx. They had a new idea for a hardware platform that was proving to be difficult to fund. When Trip came across them he saw a way forward for EA and the industry without being tied to Nintendo or Sega. Trip asked Mical and Needle to rework the design slightly through their company, NTG, to align the fledgling system with Trip's view of the future of gaming. In all there would be seven partners – Matsushita, AT&T, Time Warner, MCA, Electronic Arts, venture capital firm Kleiner Perkins Caufield & Byers, and the New Technologies Group (NTG) – involved in the development and marketing of the console dubbed the 3DO. The 32-bit system would allow developers a much freer development cycle. With licensing at $3 per game and no regional lockouts, Trip had created a business plan that was tailored to the needs of publishers and not hardware manufacturers. EA developed the operating system for the machine. The 3DO company was formed and Trip became chairman.

In-house, EA was working furiously on 32-bit versions of some of its bestselling titles. Origin Systems created the seminal *Wing Commander IV*, while Distinctive (now renamed EA Canada) toiled over the transition of *FIFA* and *Madden* into the world's first true 3D sports games, and partnered



1990 EA BECOMES A PUBLIC COMPANY. ITS SHARES STARTED AT $8 A SHARE; BY YEAR END THEY WERE $37

EA BROKERS A FAVOURABLE LICENSING DEAL WITH SEGA

1991 EA BUYS DISTINCTIVE SOFTWARE AND TRIP HAWKINS STANDS DOWN AS CEO BUT REMAINS CHAIRMAN

1992 EA BACKS DOWN AND AGREES TO PUBLISH GAMES FOR THE NES

1993 FIFA INTERNATIONAL SOCCER IS RELEASED AND RAISES THE BAR FOR ALL FOOTBALL GAMES SINCE

1994 TRIP HAWKINS RESIGNS FROM EA TO CONCENTRATE FULL-TIME ON 3DO

1995 EA RELEASES ITS ONLY TENNIS GAME TO MUTED RESPONSE

1996 EA RELEASES FEWER GAMES THIS YEAR THAN IN ITS HISTORY, 52 IN TOTAL, AS IT LOOKS TO RE-ESTABLISH ITSELF

1997 EA BUYS MAXIS IN A MOVE THAT WOULD SEE IT ACHIEVE UNBRIDLED SUCCESS THROUGH THE FOLLOWING DECADE

1998 EA BUYS WESTWOOD STUDIOS FROM VIRGIN

1999 EA RECALLS TIGER WOODS 99 FOR THE PSONE. IT WAS SHIPPED WITH AN EPISODE OF SOUTH PARK ON THE DISC THAT COULD BE VIEWED VIA A PC

3DO - SIX HITS

FIFA International Soccer

When *FIFA* came out on the 16-bit machines it typified the hardware it was on, shunning 3D in favour of an isometric view. Once the 3DO arrived developers could make the game they always wanted to. The presentation would become a staple of EA games, where tactics and strategies came to the fore and everything shone.



Madden NFL '94

The greatest sports game of the period. *Madden NFL '94* featured real team playbooks for the first time, incredible visuals and surround sound that made you feel like you were in the stadium. Fluid and fast, with Madden behind his sports desk giving tips throughout, this was the full package, and, in truth, the game remains the same today.



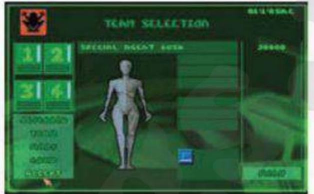
Road Rash

A massive hit on the Mega Drive, when it came to the 3DO it courted controversy, with betas allowing you to knock over pregnant women and children. At retail, however, pedestrians jump out of the way, although rumours persist of a code that regresses the game. Violent and fast, few games have come close to capturing the thrill of playing *Road Rash*.



Need For Speed

The EA game with most iterations outside of the sports range. *Need For Speed* was all about the muscle cars of the day; Dodge Viper, Toyota Supra and Porsche provided the mainstay of the vehicles. Lap times were less important than avoiding the police. A real petrolhead paradise with great visuals and recorded engine sounds for the first time.



Syndicate

Arguably Bullfrog's finest, the 3DO had the best version of all. The dystopian futurescape was realised with lavish attention to detail and benefited incredibly from the 3DO's Dolby setup, adding to the atmosphere and making the whole game feel more like an experience. A shame then that the 3DO was dead before *Magic Carpet* flew into view.



Immercenary

Awesome. Sent forward in time, the player lands in a virtual-reality world governed by Raven (an evil Queen) and populated with Picasso-inspired characters. The invention on display here has never been bettered by EA, or anyone else come to think of it. Think *Assassin's Creed* meets *Lawnmower Man* at the Tate, and you're nearly there.

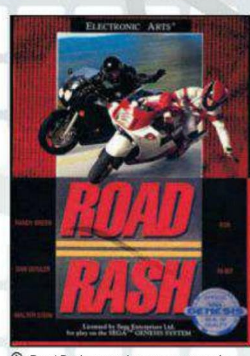
"BOASTING AN ISOMETRIC VIEW AND A MORE AUTHENTIC FEEL IT WAS AN INSTANT HIT. FIFA WAS TO FOOTBALL WHAT MADDEN WAS TO THE NFL"

road and track in the development of *Need For Speed*, a game that would redefine what gamers expected from home versions of driving games, with car videos and bios alongside realistic physics. With each 3DO release EA showed just what the future of gaming held, and the presentation that has since become EA's hallmark was launched on to the masses. *Road Rash* on the 3DO, for instance, had a fully licensed soundtrack, with bands such as Therapy making up the numbers, while *FIFA* showed clips of classic World Cup games during intervals. *Madden* was the perfect game, though, causing the usually dour *Edge* magazine to proclaim: "Buy yourself a copy of *John Madden* and then buy a 3DO to play it on." One of the marketing tools that the 3DO employed was that during the Super Bowl in 1994, a 3DO was set up to run a game of *Madden* to simulate the final. As coverage shifted back to the studio the sports presenters would check in to see how the game was going. In that first year, in what is now an annual ritual, the score was within ten points of the final score and the game also got the winner right.

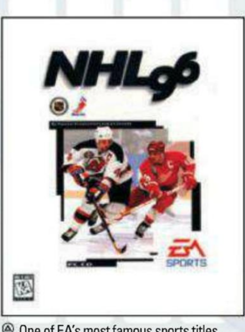
It was too little, too late for 3DO, though, as lots of uncharacteristic mistakes had been made in the business model, and as Sega and Sony readied their 32-bit machines for the world outside Japan, decisions had to be made and Trip had to choose between EA and 3DO. "It was a gradual accident," he says. "I intended 3DO to be a sister company and to remain involved with both, but they evolved on separate arcs and I felt obligated to keep 3DO alive. By the time it became necessary to split, it was difficult, like choosing between a healthy teenage son and a baby that was in surgery." Trip made his choice and left EA.

Larry Probst took over at the helm and quickly moved the business back to publishing and creating games for all available formats. Each 3DO title EA made had cost about $2.4 million, and even *FIFA* didn't break even. The 3DO had been costly to EA, but the creative endeavours had taught the company a lot about 3D and the journey had created franchises that would port well to current and future generations. To date *Need For Speed* has had countless instalments and has appeared on almost all formats since its inception in 1994. Short-term, 3DO was an expensive folly for EA. Long term, it had made it a pioneer of 32-bit software and CD-ROM technologies in the home.

For the rest of the Nineties, EA would continue its support of sports updates, and in 1998 it signed Tiger Woods to develop the *PGA* series further. Most of its significant new titles and franchises would be developed for the PC and Mac, with weaker console conversions to follow: *Medal Of Honor* set the PC charts alight in 1999 and started the WWII FPS craze that is still with us. Support carried on for the 16 and 32-bit systems up to the final death throes of each console. The GBA proved a lucrative market for EA, allowing it to port many older titles. With the 1998 acquisition of Westwood Studios from Virgin, *Command & Conquer* joined the EA stable in time for Christmas 1999, while Origin took *Ultima Online* and EA published a string of *Warcraft* games in Europe. Gamers, by now, were feeling an apathy for EA under Probst. Despite being the company with the triple-A sports franchises and having brought Sid Meier and Molyneux to the masses, EA found it hard to find a fan base away from sports titles. EA took the *James Bond* licence from Rare in 1999 and made *Tomorrow Never Dies*. Following Rare's opus was never going to be easy, but with a third-person perspective and muted response EA had a flop on its hands. As the Nineties came to a close, EA, which had brought so much, was in danger of eclipsing Acclaim's demise. Too big to survive on sports games alone, it needed more of what had made it successful. Fortunately for Probst, it was about to find it…

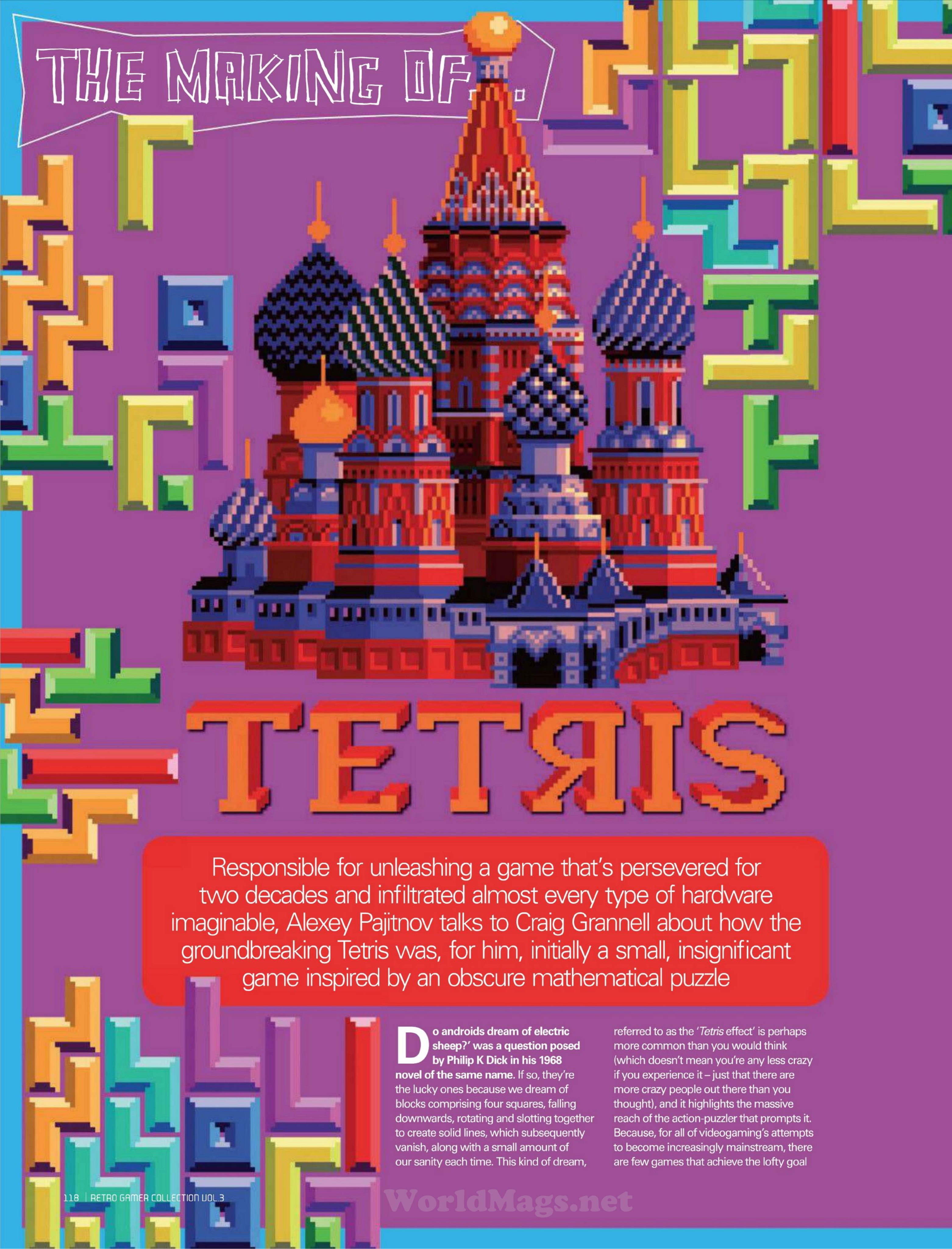


Road Rash courted controversy, and so proved very popular for EA.



One of EA's most famous sports titles.

TURN TO PAGE 148 FOR PART 3



THE MAKING OF...

TETRIS

Responsible for unleashing a game that's persevered for two decades and infiltrated almost every type of hardware imaginable, Alexey Pajitnov talks to Craig Grannell about how the groundbreaking Tetris was, for him, initially a small, insignificant game inspired by an obscure mathematical puzzle

Do androids dream of electric sheep?' was a question posed by Philip K Dick in his 1968 novel of the same name. If so, they're the lucky ones because we dream of blocks comprising four squares, falling downwards, rotating and slotting together to create solid lines, which subsequently vanish, along with a small amount of our sanity each time. This kind of dream, referred to as the '*Tetris* effect' is perhaps more common than you would think (which doesn't mean you're any less crazy if you experience it – just that there are more crazy people out there than you thought), and it highlights the massive reach of the action-puzzler that prompts it. Because, for all of videogaming's attempts to become increasingly mainstream, there are few games that achieve the lofty goal

"TETRIS AND GAME BOY WERE BORN FOR EACH OTHER – THEY FIT TOGETHER SO WELL. I CAN'T IMAGINE TWO OTHER PRODUCTS CREATED ABSOLUTELY INDEPENDENTLY THAT FIT EACH OTHER SO WELL"

» Above and right: The NES version. Feeling annoyed because you think you're not getting enough 'I' pieces? NES *Tetris* keeps count – handy for paranoid gamers.

of being truly recognisable to all – even stalwart classics such as *Space Invaders* and *Pac-Man* may be unknown to younger audiences. However, *Tetris* is different – almost ubiquitous. For all its appeal and reach, it started off as little more than an amusing distraction for its creator, Alexey Pajitnov, while he tested new hardware while working at the Dorodnicyn Computing Centre of the Academy of Science of the USSR, in Moscow.

MOTHER RUSSIA

As a graduate of computer science, Alexey's work at the Academy of Science was largely based around artificial intelligence research, and he describes himself at the time as "a young workaholic – the type that loves to program and sit for long hours at work". Alexey was also tasked with figuring out how new hardware that regularly arrived at the academy could be put to use for his research. "The best way to learn a new machine is to try and make a small program for it to see how it works," he explains, leading up to the reason why *Tetris* was initially created. "Small computer games were the ideal form for this kind of testing program, and that's why I had some kind of excuse, if you will, to work on my game."

Of course, hardware is somewhat by the by – the crux of any game (or, at least, any good game) is its concept, and although *Tetris* would become a fluid, organic project during development, its seeds were sown early on in Alexey's life. "I was a sharp kid, and have always been interested in riddles and puzzles, and I even changed schools to join one with a special mathematical component," he explains. "That was also the time of communism in Russia, and so we didn't have too much entertainment around us – and so intellectual mind games were a very good diversion. I saw this passion all around me, and children used to compete in a kind of 'mathematical Olympics' competition, in which I participated a lot. This part of my life later translated into the games that I did."

Of the puzzles that fascinated Alexey, pentominoes stood out. "It's a dozen pieces made out of five squares, and they kind of look like jigsaw pieces, only more mathematical," he explains. "The puzzle existed in Russia, sold in stores and fashioned in plastic, and I thought it was absolutely great – the best puzzle in the world." What appealed most was the simplicity of the pieces and the massive scope they offered for multiple combinations: "There's no technology in pentominoes – you just take the pieces from the box, play with them and enjoy them. But when you want to put them back in the box, you can spend a couple of hours doing so – at least if you're stubborn enough to try!"

Alexey decided a two-player version of pentominoes might make an interesting game to use for testing the Electronika 60 desktop computer that had recently arrived at the Academy of Science. "I thought that you could somehow divide the pieces – six to each player – and start to put them back into the 'box', and whoever was unable to make the next move would lose," he says.

Without any specification of a final set of rules, Alexey set to work on programming his new game: "First, I needed to create an environment, some kind of graphical





» The DOS port helpfully tells you to 'Play *TETRIS*!', in case you thought it was some kind of blocky rolling demo.

IN THE KNOW



» PUBLISHER: N/A

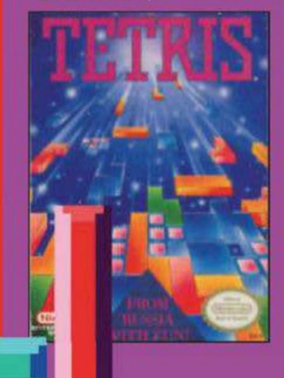
» DEVELOPER: ALEXEY PAJITNOV

» RELEASED: 1985

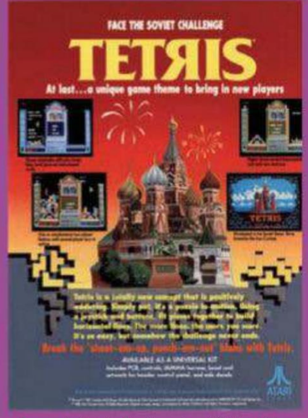
» GENRE: ACTION-PUZZLER

» FORMATS: ELECTRONIKA 60; CONVERTED TO: DOS, GAME BOY AND JUST ABOUT EVERY OTHER PLATFORM IN EXISTENCE.

» EXPECT TO PAY: N/A



THE MAKING OF… TETRIS



» An arcade flyer for Atari's version of *Tetris*, which featured a surprisingly good two-player mode.



» Alexey Pajitnov's original Electronika 60, with slightly less grunt than a tiny piglet.

procedure to visualise the play field and the pieces. However, at the time this was tricky because my display didn't have any graphics at all – all I had were 24 lines of 80 alphanumeric symbols." In order to design the squares that made up the various pentominoes, open and close square-bracket symbols were used – two together forming a basic square. A ten-by-six play field was created, along with the mechanism to position, rotate and flip each of the pieces before moving them to the field. "But when I wrote the procedure for rotating the pieces, it worked very fast and looked funny – if you frequently pushed a key, the puzzle piece rapidly rotated on the screen," remembers Alexey. "This was so amazing for me. That sounds really ridiculous now [he laughs], but that was the first time I had ever seen such stuff on the screen."

THE BIRTH OF TETRIS

Upon seeing the spinning pieces, Alexey hit upon the idea of making them rotate and move in real time upon being placed on to the screen. "This was a very important moment for *Tetris*," says Alexey. "It went from being a two-player version of a strange game based on an obscure mathematical puzzle to the idea of a real-time game that used the same pieces." First, gravity was used as a natural way for the pieces to fall down. It then became apparent that the original field of play was too restrictive, and so it was enlarged and aligned vertically. "Everything worked, but when I started playing the game, I realised it was really complicated," remembers Alexey. "Pentominoes are fine when you have unlimited time to sit and think about how to use them, but they were too complex for my real-time game where you need to immediately recognise a piece and know what to do with it."

The pieces were honed down to forms made up of four squares – tetrominoes. The complication of piece-flipping was also dispensed with, Alexey instead adding the symmetrical forms of non-symmetrical pieces to the available set. "Suddenly, the interface was much simpler", he says. "You only needed to move and rotate pieces. Because the set was now simpler, I decided you didn't need for the entire set to fall down – pieces could appear in a random order."

Tetris started to resemble the game that we all know and love, but one major component was still missing. "At this point, the game ended really quickly, even if you didn't make mistakes, because the play field was so small, and so I started thinking of ways to prolong my pleasure," laughs Alexey. "My original idea was to create a long, narrow well that could scroll. But after thinking about this, I didn't like the idea – it was difficult to get scrolling working on my machine, and the player would also have to remember what was already on the board. I didn't think my simple mind game should be that complicated." The solution was far simpler: Alexey realised that when a horizontal line was completed, it became obsolete, just taking up space. "I thought, 'Why keep it on the screen?', when I need



» To make the game tougher, *Tetris DX*'s programmers added a vomit-inducing colour scheme and vile, animated backgrounds.



» The game that sold 30 million Game Boys. Even today, the Game Boy version of *Tetris* makes us emit happy sounds.

DEVELOPER HIGHLIGHTS

WELLTRIS
SYSTEMS: DOS (CONVERTED TO AMIGA, AMSTRAD CPC, ARCADE, ATARI ST, C64, MAC OS, ZX SPECTRUM)
YEAR: 1989–91

PANDORA'S BOX
SYSTEM: WINDOWS
YEAR: 1999

HEXIC HD (pictured)
SYSTEM: XBOX 360
YEAR: 2005

"THE SCREEN WAS REALLY UGLY, AND THE INTERFACE WAS VERY PRIMITIVE – THERE WAS NO REAL DECORATION ON THE SCREEN – BUT IT WORKED. IT WAS SO ADDICTIVE THAT I COULDN'T STOP PLAYING TO FINISH THE DAMN THING!"



» Lurking within *Tetris Worlds* on the PlayStation 2 is a version of the original *Tetris*. Feel that ASCII goodness!

more space to prolong my pleasure," says Alexey. "Instead, I could take it away and give a score for it. And that was the last important moment for *Tetris* – once I did this, the game was kind of ready."

The *Tetris* on Alexey's machine at this point was, by his own admission, something of a prototype. However, all of the game's important mechanics were there, and the game had been surprisingly easy to create. "I give you such details about the game, but all the decisions were done in one day, in a couple of hours," claims Alexey. "In reality, somehow, all these decisions were made so naturally." Most importantly, the game was fun – so much so that it took another couple of weeks for Alexey to get the game into a state he was happy with: "The screen was really ugly, and the interface was very primitive – no real decoration on the screen – but it worked. It was so addictive that I couldn't stop playing, in order to finish the damn thing!"

SHARE AND ENJOY

With the game debugged, complete with a level system, scoring and a high-score table, Alexey decided to spread it around Moscow. "It was like a wood fire," he exclaims. "Immediately, every place where they had the Electronika 60, my *Tetris* game was working there, and I realised that maybe the game was not bad and should be ported to the PC, because that was the only way to show it to the world outside Russia."

The only snag was Alexey's lack of familiarity with the PC – at that point, the first PC had only recently arrived in the computer centre, but it wasn't in Alexey's possession and he didn't know how to program it. "I was interested in lots of other stuff, and so it might never have happened if it wasn't for Vadim Gerasimov," states Alexey. "He was a schoolboy at the time, but an absolutely genius programmer who fell in love with the PC and knew every bit of the operating system – many big guys in the computer centre went to him for consultation, and someone recommended I work with him on my game." And so, Alexey gave Vadim his code in Pascal, and he began the process of transferring the 2000 lines of code from one machine to the other. "There was nothing in common with the machines – no format, no disks, nothing – but once the code was across, the rest was a piece of cake."

Unlike Alexey's original, colour was possible in the DOS conversion, giving players an additional way to recognise each tetromino. Other features were added over the following months, including the ability to show the next piece, an option to make the square tetromino an invisible 'phantom', and settings that dictated the starting level and height of 'garbage' at the bottom. One similarity to the original was how the game was spread. "The release process was simple – we just gave the game to a couple of our friends," jokes Alexey. "Within a couple of weeks, I saw it everywhere – on every PC in Moscow – and within a couple of months we got a PC from Eastern Europe that was entirely empty, apart from MS-DOS and *Tetris*."




» *Tetris Zone* for modern PCs requires a 'mere' 8,000 times the RAM of Alexey's Electronika 60 version.



» Turn back now, C64 users! SIT's lovely (but unrelated) title screen masks the jerky, nasty game beyond.

EASTERN BLOCKS

Few games have provoked such legal wrangling as *Tetris*. Once the DOS version spread, Andromeda Software's Robert Stein tried to secure the rights, selling home computer rights to Spectrum Holobyte prior to any deal, and continuing to sub-license rights he didn't own, even after the Soviet government began to market *Tetris* rights via Elektronorgtechnica (ELORG). Eventually, Stein's hand was forced, ELORG enabling handheld rights to remain with Andromeda, but banning *Tetris* rights on any other mediums. By the late-Eighties, several companies claimed *Tetris* rights ownership over home computers and consoles; and so ELORG signed the arcade rights to Atari and console and handheld rights to Nintendo. A major spat occurred when Tengen, Atari's console division, tried to release a NES version of its arcade title, something that had Nintendo fuming. Eventually, Tengen's creation was withdrawn, and while Nintendo's NES release was seen as ordinary, its Game Boy version was one of the most successful games ever.
In 1996, Pajitnov and Henk Rogers formed The Tetris Company, gaining rights and finally providing Alexey with royalties for the game he created over a decade earlier. For more details: www.atarihq.com/tsr/special/tetrishist.html.

THE MAKING OF... TETRIS

QUEASY SPIN

Tetris Worlds was heavily criticised for including an 'easy spin' feature (despite it actually originating in *The Next Tetris*), which enables rotated tetrominoes to be floated indefinitely, rather than locking upon landing on another piece. By utilising this method, gamers can make games of *Tetris* last for several hours, therefore many critics claim that this single feature 'breaks' the game.

The feature has since been integrated into the official guidelines and is defended by Henk Rogers of The Tetris Company, who claims that it helps newcomers recover from small mistakes, but *Tetris*'s creator is not so sure of its value. "I still don't like it very much," says Alexey. "Unfortunately, on different platforms it was a new style of playing and later on we didn't want to lose the customers, and therefore we tried to support all of those modes. Ideally though, I would have preferred for the game to be as simple as possible."



» The extreme difficulty curve of Atari's arcade *Tetris* is made up for by the stunning dancing prowess of the little Russian chap.



» *Tetris DS* offers six variations on *Tetris*. (But do any of them omit 'easy spin'? No, they do not. Grrr.)



» We're not sure what that packaging says, but we're pretty sure that it's not 'The Biggest *Tetris* Ever!'

From there, *Tetris* exploded on to the world scene. Each version was followed by a lawsuit, as various companies battled to secure rights to the game, while Alexey looked on, not receiving any remuneration, due to ownership residing with the Academy of Science. Alexey is reluctant to talk about what he refers to as *Tetris*'s 'business period', but he's happy to elaborate on what he thinks made the game so popular in the first place, to make the gaming giants scrap over it. "It appeared in the right place, at the right time," he says. "At the time, we didn't have many games on the PC, especially fresh games and puzzle games. Most of what I saw at the time were arcade games, and they looked a little childish." Alexey's keen to note that he loves most types of games and played the likes of *Pac-Man* a lot – the problem was with professionals who had no direct interest in games: "Many people didn't feel good with that type of childish design, but *Tetris* was abstract and without any age connotation, and so everyone felt fine to play it."

BLOCK PARTY

The other thing Alexey believes helped *Tetris* become so popular was that it enabled everyone to join the party: "In the Eighties, computers were a relatively new phenomenon, and some people were almost afraid of them. You never knew what would happen when you pressed a button, and lots of programs were very buggy, which didn't help matters. *Tetris* was very simple and accessible, and it helped people get more familiar and comfortable with computers." Alexey then, appears to consider *Tetris* as a product of its age, rather than a timeless classic: "I'm pretty sure that had I released *Tetris* ten or twelve years later, it would have been seen as just some ordinary game – nothing really so exceptional – but it appeared on the PC at the right kind of social moment."

At this point, we're not sure we agree. We mention the reception *Tetris* got on the C64 and the Spectrum. Even though both platforms already had a wealth of available titles, and despite the 8-bit conversions of Alexey's game not being particularly good, *Tetris* still stood out from the crowd, receiving near-unanimous acclaim. "I guess that might be true as well," muses Alexey, "but then many people have put forward theories for the popularity of *Tetris*, and no one has a definitive answer – not even me." He does, however, note

"IN THE EIGHTIES, COMPUTERS WERE A RELATIVELY NEW PHENOMENON, AND SOME PEOPLE WERE ALMOST AFRAID OF THEM. TETRIS WAS VERY SIMPLE AND ACCESSIBLE, AND IT HELPED PEOPLE GET MORE FAMILIAR AND COMFORTABLE WITH COMPUTERS"





that the Game Boy might just have had something to do with the endurance of his creation. "The Game Boy release was the most lucky moment for *Tetris* – it's what made the game a real phenomenon," he explains. "Somehow, *Tetris* and the Game Boy were born for each other – they fit together so well, in terms of form and design. If I think about it, I can't imagine two other products created absolutely independently that fit each other so well." And the result of the pairing is well known. The combination of Nintendo's hardware and Russian gaming going on to sell over 30 million bundles.

END GAME

As the interview draws to a close, we ask Alexey if he had any idea what kind of a monster he was creating while working back in his lab in Eighties Moscow. "No, of course not," he laughs. "I started with the intention of creating a kind of two-player game for pentominoes. I was always writing very small, insignificant games for different processors and computers, and *Tetris* was just one of them." To hear him talk of the game in this way is strange, but it's easy to imagine how creating a '*Tetris*' is a blessing and a curse for a designer. "I became famous for *Tetris*, and decided to study to become a professional games designer. I had lots of small puzzle ideas and was excited to realise them, and so I started five or six games in a row, one after another," explains Alexey. "I was very productive – very active – I loved creating this stuff, but somehow, every time I proposed a game, everyone looked at me and expected me to deliver another *Tetris*."

After a tough couple of years, during which time Alexey regularly dismissed concepts, due to them being weaker than *Tetris*, he realised he needed to start afresh. "I decided *Tetris* was a story I had to forget about, and that I had to move ahead and start as a young, unknown designer. If you want something in this life, you sometimes have to forget your achievements and start from scratch. I started to work on naïve concepts, and decided that I needed to love it in order to do it, and that was enough – no kind of predictions or expectations of success, and no comparisons. And it started working, because although I did a lot of bad games, I created several good ones, and I'm pretty happy with my career."

We talk about other games and projects, and Alexey lets slip that it's puzzle collection *Pandora's Box* that's closest to his heart: "All this *Tetris* story is great, but a big part of the story is luck – I was lucky to create something like that at the beginning of my career. But with *Pandora's Box*, I created the concept, the genre, and put in so much effort from beginning to end." Clearly, though, *Tetris* will always be with Alexey, the two inextricably linked, the creator watching from the sidelines as his creation rampages onwards to dominate new territory. With that in mind, one final question: is Alexey still happy with his original blueprint, that's become a template for an entire genre? "When working on the original game, I had lots of ideas, such as putting garbage on the screen, but I thought it wouldn't be good for beginners," he says. "I also thought about a more complex scoring system, with premiums for clearing multiple lines, but I wanted to make the scoring as understandable as possible." Alexey pauses for a moment to consider what he would do to the original *Tetris*, given the chance, and then he finally answers: "I don't think I would change a thing."

» When *Tetris* goes wrong! *Tetris 2* on Game Boy lacks Pajitnov's involvement, and its complexity is detrimental to the overall experience.

» The rest of the world finally catches up with one of Alexey's original ideas for *Tetris*, with the DS version including scrolling.

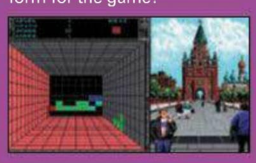
» *Tetris Worlds* with 'easy spin' was not one of the most popular versions of *Tetris*, especially among purists and the game's creator himself, Alexey Pajitnov.

THANKS TO Rik Morgan (www.handheldmuseum.com) for the handheld *Tetris* image. Special thanks to Blue Planet Software and crew (www.blueplanetsoftware.com) for the images of the Electronika 60 version of *Tetris*.

WELL WELL WELLTRIS

The only Pajitnov-created sequel to *Tetris*, *Welltris* moved the game into 3D. "Everyone wanted a 3D *Tetris*, but I realised that *Tetris* is hard enough for the brain in 2D," says Alexey. "In true 3D it would be a very boring, slow game, so I decided to create a 3D graphical effect, but keep the gameplay on 2D planes." This grew into the idea of the well, in which the bottom and walls acted in a way similar to the original *Tetris*.

"It was a good game, but unfortunately, it wasn't realised well," says Alexey. "It was perhaps too complicated and the PC version was very attached to EGA, and died with it." Alexey notes that the game managed to survive a little longer as an arcade machine: "In Japan, they created a version for four players, with each one controlling one of the walls around the well – the ideal form for the game!"



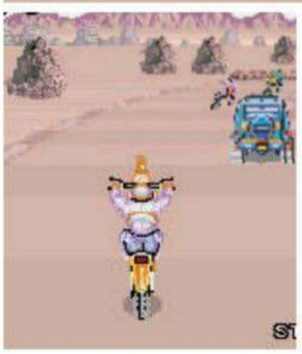
WHY YOU MUST PLAY...

ENDURO RACER

EVERYONE LOVES YU SUZUKI'S OUTRUN, SUPER HANG-ON, AFTER BURNER AND SPACE HARRIER, BUT WHY DOESN'T THE BRILLIANT ENDURO RACER RECEIVE THE SAME ADULATION?



» Special thanks to Daniel Coulom for supplying us with this screenshot from the Thomson MO5 version of *Enduro Racer*. You can view more images at **dcmoto.free.fr**.



» If you're not going to complete a stage then you might as well go out in style…

Although Yu Suzuki's *Enduro Racer* isn't a direct sequel to his 1985 hit *Hang-On*, it's easy to see how many people would draw a connection between the two racers. Both arcade machines allowed you to sit on the back of a replica bike or simply use a pair of authentic-looking handlebars on the smaller, stand-up versions, both boasted vibrant, chunky sprites that belted along at an insane pace, and they each had you racing against an increasingly tight time limit.

That's where the similarities end though, for *Enduro Racer* not only pits you against other riders and that aforementioned ticking clock, but also requires you to navigate some of the toughest terrain – for the time at least – to ever grace a racing game.

Utilising the same hardware as *Space Harrier* – and *Hang-On*, for that matter – Yu Suzuki upped the ante by having the action take place on a far more exciting track, that made the track of *Hang-On* as exciting as a Sunday afternoon walk through Bournemouth Gardens. As with *OutRun*, which was also released in 1986, the course you sped along was no longer flat and lifeless, but was instead an undulating, almost organic creation that dipped and bobbed like a living entity. The excitement of speeding along this constantly changing track was further enhanced by the occasional presence of deadly patches of rock and huge dirt mounds that would fill the entire track from side to side.

Hit these ramps correctly – by forcefully pulling back on the handlebars before you made impact – and your rider would soar

TIMELINE



UP 'N DOWN
Version Featured: Arcade
Year Released: 1983



BUGGY BOY
Version Featured: C64
Year Released: 1987



BIG RUN
Version Featured: Arcade
Year Released: 1990



MOTO FRENZY
Version Featured: Arcade
Year Released: 1992



SEGA RALLY CHAMPIONSHIP
Version Featured: Saturn
Year Released: 1995



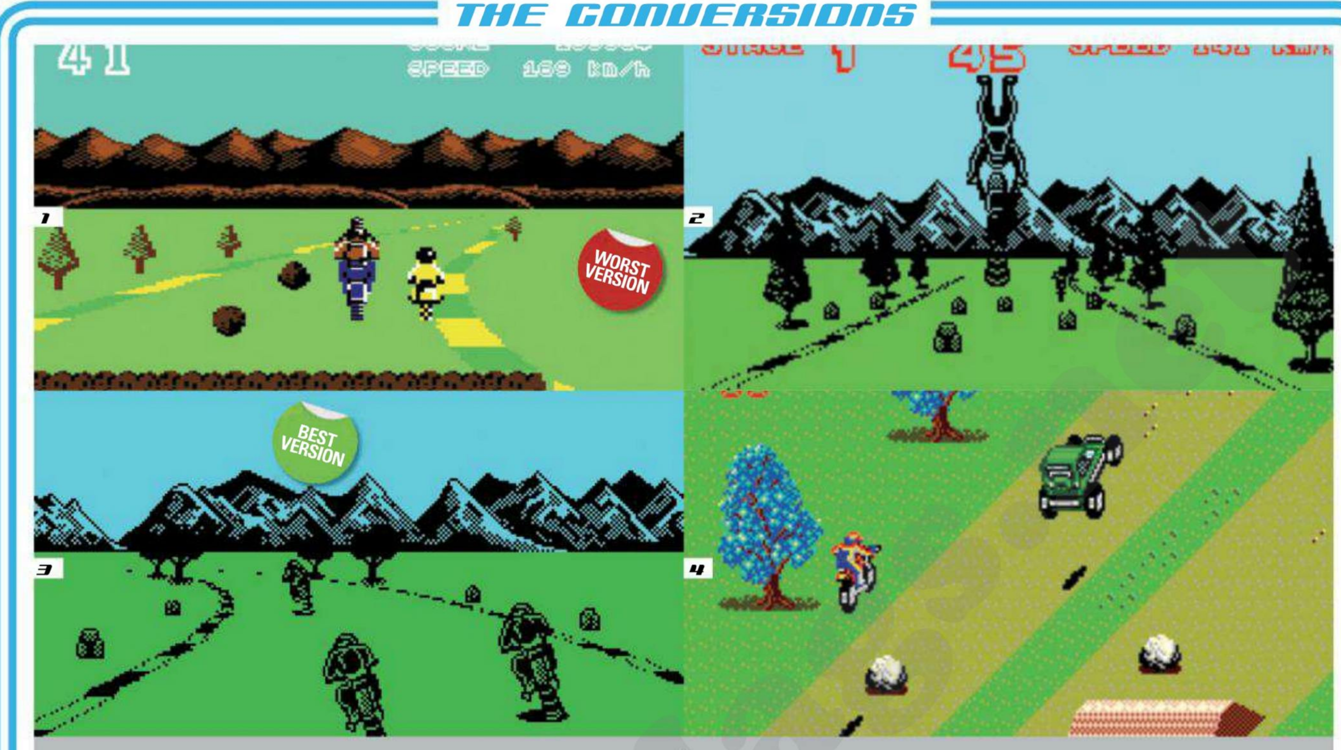
COLIN MCRAE RALLY 3
Version Featured: PC
Year Released: 2003

MX VS ATV UNTAMED
Version Featured: Xbox 360
Year Released: 2008





THE CONVERSIONS



1. COMMODORE 64
Oh dear. This is one sorry effort. We were never expecting the home machines to capture the thrills and spills of the original, but we weren't expecting this trash either. With its sluggish controls, lack of speed and questionable collision detection, this is the worst conversion of *Enduro Racer*. The fact that the sprites look as if they've been created by a three-year-old child and a set of Lego blocks doesn't help. Stay well away, or simply close your eyes and imagine you're playing the original.

2. AMSTRAD CPC
We're never fans of direct Speccy ports, so we were instantly put off by this lacklustre Amstrad conversion, as it smacks of laziness. While it looks better than the horrendous C64 effort, it still suffers from a lack of speed, dodgy controls and dull as ditchwater gameplay. Kudos for making the sprites look like actual dirt bikes – and not mopeds like in the C64 outing – but this is another example of an 8-bit system being unable to match the arcade parent it was based on. What a pity.

3. ZX SPECTRUM
This is more like it. The ZX Spectrum effort is far from brilliant – it's still too slow for our liking – but there's no denying that it's the most authentic version of the 8-bit bunch and we've lost a hell of a lot of time on it since writing this article. Scrolling is smooth and slick; the big bold sprites look great and perfectly capture the styling and feel of the originals, while the dubious collision detection that was so rampant on the Amstrad and C64 efforts is nowhere to be seen. The Spectrum gets an easy win.

4. MASTER SYSTEM
This is just plain bizarre. There's no denying that Sega's version of *Enduro Racer* is miles ahead of the competition in terms of visuals and gameplay, but why does it look like *Paperboy*? Stupidly easy to play, there's rarely more than a buggy on screen at any one time, *Enduro Racer* may be a competent variation on *Excitebike*, but it has little in common with the original game. If you were hoping to find a console version of the arcade original then you're going to be very disappointed.

majestically through the air; easily bypassing the dangerous hazards on the other side. Get your timing wrong, however, and the unlucky fellow would get flung from his seat and end up among those deadly rocks found on the other side. Even these poorly timed leaps weren't without merit, however, as it made for some tense moments as you desperately tried to weave your way through the ever-complicated rock formations.

Indeed, these potentially deadly encounters actually highlighted *Enduro Racer*'s greatest strengths, for few other racers – especially those on two wheels – were able to match the exhilaration that Yu Suzuki's off-road racer was able to offer. After all, here was a game that not only constantly pushed you, but also required you to have upper-arm strength that would put an arm wrestler to shame – constantly pulling back on those handlebars took a lot out of you.

While it certainly had its issues – good luck completing later stages if you've already crashed, or finding a machine that didn't suffer from buggered-up handlebars – there was something immensely satisfying about tackling those deviously designed courses that only Leftfield's excellent *Excitebike 64* has ever been able to successfully recreate.

Unsurprisingly, various 8-bit systems ended up with their own conversions, courtesy of Activision, but none came close to matching the excitement of the original – although many Spectrum owners will (rightly) argue that theirs was definitely the best of a distinctly average lot.

We've never really understood why *Enduro Racer* never gets mentioned as often as the likes of *OutRun* and *Space Harrier*, because it's easily on a par with those other Yu Suzuki hits. All we can hope is that this article will persuade you to track a copy of the game down for yourself, or visit a lonely, windswept arcade in the hope that one's still surviving in the world.

THINGS TO LOOK OUT FOR

DIRT RAMPS
Hit one of these bad boys just right and you'll soar gracefully through the air, missing out many dangerous hazards.

CARS

You don't start seeing these until the second stage. Larger than rival bikes, they prove to be far harder to pass and can easily send you sprawling.

ROCKS

Hitting these will put you in a whole world of hurt, so just don't do it, okay? Later levels see these immovable objects getting larger and larger.

BIKER

Although you'll be on the starting line with four other bikers, that doesn't mean you won't constantly pass more of them as the race continues.

TRY THIS NEXT

POWER DRIFT
Want more Sega thrills and spills? Then hunt down the excellent *Power Drift*, which was also by Yu Suzuki. The undulating tracks of *Enduro Racer* have been replaced by elevated courses set dangerously high above the ground; there are a further seven racers to go head-to-head against and the visuals look absolutely fantastic. Be warned, though: if you can't afford the insane cost that a sit-down machine goes for then your best bet is to try to track down the rather impressive Dreamcast version, which can be found on the *Yu Suzuki Game Works* collection.





Year released: 1981 **discontinued:** 1986

BBC Microcomputer Model A - 16K RAM
Original price: £235
Max screen resolution: 320x256 pixels (Mode 4)

BBC Microcomputer Model B - 32K RAM
Original price: £335
Max screen resolution: 640x240 pixels (Mode 0)

6502 processor running at 2MHz OS: BBC BASIC housed in 32K ROM Tape interface by default, optional floppy disk interface available. Four sound channels: 3 melodic, 1 noise. The Tube interface offers additional processor to be added. Compatibility with Acorn Econet.

RETROINSPECTION

BBC MICRO

LEGAL WRANGLING, PLAGIARISM, FINANCIAL RUIN, ARSON… WHO SAID THE BBC MICRO WAS JUST A TOOL FOR SCHOOL? STUART GOODWIN LOOKS BEYOND THE CLASSROOM, AND FINDS AN OFTEN MISUNDERSTOOD CLASSIC, AS WELL AS SOME OF THE BEST GAMES OF ALL TIME…

The story of the BBC Microcomputer can be traced back to a number of unexpected locations, most notably one of Sir Clive Sinclair's companies, the warehouses of a Welsh fruit machine manufacturer, and even a cattle shed in Harrogate. Since 1966, Chris Curry – an employee of Sir Clive Sinclair – had worked behind the scenes for Sinclair Radionics, developing a number of products including calculators and wristwatches, as well as a pre-Sinclair C5 electric car. Following financial problems, Sir Clive shifted focus from Radionics, and encouraged Curry to work for another of his companies – Science Of Cambridge (SoC). SoC would later become Sinclair Computers Ltd.

Curry's own focus shifted to microcomputers and, in particular, a microcomputer kit that SoC had developed. Sinclair, however, failed to back further development of the kit and, in December 1978, Curry formed his own company alongside a friend: Austrian-born physics graduate Hermann Hauser. Their new venture, Cambridge Processor Unit (CPU), quickly found a customer in Ace Coin Equipment Ltd, for whom they designed fruit machine controllers. The following year, CPU became Acorn Computers Ltd.

In 1979, Acorn's first Microcomputer, the System 1, was launched, designed by computer scientist Roger (now Sophie) Wilson. Back in 1977, Wilson had designed a sophisticated automated cow feeder, based around a 6502 processor, for a farm in Harrogate. "The cow feeder led directly to the System 1," Wilson recalls. "Hermann wanted someone capable of building an 'electronic pocket book' – we might call it a PDA now. I showed him the designs for the cow feeder, and for my own computer, and he challenged me to build it."

Systems 1-5 were designed primarily for engineering and laboratory use. By 1979, however, Sinclair was working on the ZX80, and Curry pushed for Acorn to turn its attention to the home computer market, severing his remaining ties with Sinclair in the process. The first fruits were The Atom in 1980. "This was a time when you were expected to be able to solder in order to use a computer – most machines came as kits," says David Braben, co-author of *Elite*. The basic Atom, featuring 2K of RAM, sold in kit form for £120, or £170 ready assembled, while an expanded model featuring 12K was also available. "For its time it was a fantastic machine," Braben continues, "one advantage of the kit mentality was that machines had very open designs – circuit diagrams were freely available – and so expanding in unconventional ways was quite practical. Pretty soon my machine was twice the original speed, and had 48K of RAM!" One notable feature of the Atom was support for Econet, Acorn's local area network, which allowed 250 computers to be networked together.

The machine was considered a relatively successful entry into the market for Acorn. However, some of the technical staff within Acorn

INSTANT EXPERT

The working title for the BBC Micro was Proton.

The computers took the name 'BBC' as the computers were used at the heart of the corporation's Computer Literacy Project.

Other computers in the running for the BBC contract included the Grundy NewBrain.

Two models of the BBC Micro were launched in November 1981 – Model A, priced £235, and Model B, priced £335.

The BBC Micro is powered by a 6502 processor. This processor also powers the Commodore PET and VIC-20, as well as the Atari 400 and 800.

A second processor can be added to the BBC Micro via an interface called The Tube, which significantly boosts the computer's performance.

A cut-down version of the BBC B – the Electron – was launched in August 1983, priced £199.

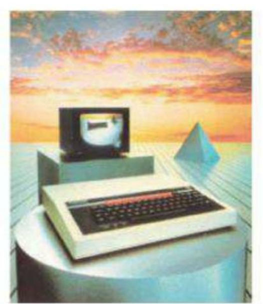
Problems with supplying adequate numbers of Electrons for Christmas 1983 placed Acorn under severe financial pressure.

The BBC B+ launched in 1984, which featured double or even quadruple the amount of memory found in a standard BBC B.

Acorn was eventually taken over by Olivetti in 1985, and released its final 8-bit computers – the Master series – in 1986.



BBC MICRO


» This press pic conveyed to consumers that, with the BBC B, the sky really was the limit.

were unconvinced. "We simply didn't like the chips in the Atom," says Wilson, "in particular the MC6847, which was an NTSC-only video chip." By the time the Atom launched, Acorn was already hard at work on its next machine, the Proton. "The Proton had been in development before the Atom conceptually," Wilson continues, "though the impetus to start it as a real project only came after the Atom was financially successful."

In 1981, BBC Education launched the Computer Literacy Project, revolving around a ten-part television series. "The aim of the project is to introduce interested adults to the world of computers and computing," said the press release, "and to provide the opportunity for viewers to learn through direct experience how to program and use a microcomputer." The BBC wanted to build the project around a machine capable of performing a multitude of tasks, which could then be used to demonstrate the fundamentals of computing on TV, and contacted several British-based computer companies. Several computers were considered, most notably the Sinclair-affiliated Grundy NewBrain, as well as Acorn's own Proton. "The project only gained real momentum with the impending visit of the BBC people

Free software, only £225.

If you own a BBC Micro, you can now download, store and run programs (transmitted free of charge via Ceefax) with the new Teletext Adaptor, priced £225 inc. VAT.

These programs make up the BBC Telesoftware Service (which is intended to become a computer software broadcasting channel) and although primarily educational, they will soon develop into general interest and business areas.

And, as they will change every two weeks, you'll soon be able to build up a vast bank of top quality software without ever having to put your hand in your pocket.

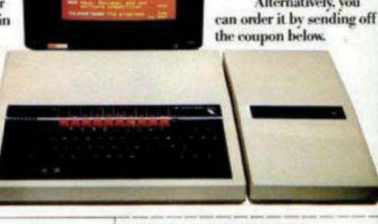
But that's not all the adaptor has to offer. It also enables you to gain access to the normal teletext store of data. This is different to simply having a teletext TV because it means this data can now be transferred to memory and manipulated in any way you wish (making graphs or bar charts for instance).

It's yet another development in our programme to help you fully realise your BBC Micro's potential.

If you're a credit card holder you can order the Teletext Adaptor by ringing 01-200 0200 at any time or 0933-79300 during office hours.

(You can also find out the address of your local BBC Micro dealer by calling the same numbers.)

Alternatively, you can order it by sending off the coupon below.



Technical Specifications
Access to Teletext and Telesoftware Services broadcast on U.H.F. channels E21 to E69.
Speed of max. data capture rate approx. 128k baud. (8 lines of Teletext per frame.)
Height 70mm. Width 210mm. Depth 350mm. Weight 2kg.
Colour: BBC Computer cream.
Construction: Moulded top and bottom to match BBC computer profile. ABS injection moulded plastic.
Controls: Four tuning potentiometers on rear panel. Mains on/off switch on rear panel.
Power in 240v, 50Hz, 15w.
Operating Temperature: 10° to 35°C.
Designed and manufactured to comply with BS415 Class 1 standard.

To: BBC Microcomputers, c/o Vector Marketing, Denington Estate, Wellingborough, Northants NN8 2RL.
Please send me ______ BBC Teletext Adaptors at £225 each, inc. VAT and delivery. I enclose PO/cheque payable to Readers A/C, Acorn Computers Ltd, or charge my credit card.
Card Number ______
Name ______
Address ______
Postcode ______
Signature ______

The BBC Microcomputer System.
Designed, produced and distributed by Acorn Computers Limited

» If you were going to treat yourself to a shiny new BBC Computer, then this expansive pach was surely the one to go for.

> "THANKS TO THE LINK-UP WITH THE BROADCASTER, THE BBC COMPUTERS WERE A CONSIDERABLE SUCCESS IN THE EDUCATION MARKET"

to see a Proton prototype – which didn't exist at the time," recalls Wilson. "We had a week to build it."

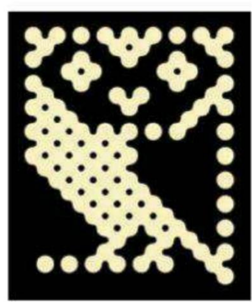
Despite the tight time frame, the prototype was up and running within a week, and impressed the BBC representatives sufficiently to ensure Acorn obtained the high-profile link up. "I guess we got the contract partly because what we were building anyway was close to what they wanted, and partly because they saw that our engineering was good enough to make it happen," says Wilson. What had been known as the Proton, hit the shelves in November 1981 as the BBC Microcomputer System, just like Systems 1-5 and the Atom, another computer based around the 8-bit 6502 processor found in Wilson's cow feeder.

Two different flavours of the BBC Micro were initially available – the 16K Model A, and the 32K Model B, launching at £235 and £335 respectively. Demand outstripped supply, however, and increased production costs soon caused these prices to rise to £299 and £399. "A BBC Model A was the first computer I owned," recalls Gary Partis, author of several games including *Psycastria* and *Sphere Of Destiny*. "It was a Christmas present in 1981 which didn't get delivered until March 1982." The Model B soon emerged as the bigger seller of the two, and many Model A users eventually invested in Acorn's A to B upgrade option on the cheaper model.

The BBC Micro saw the first outing of Wilson's excellent BBC BASIC, a powerful but simple language, which provided many users with their first exposure to computer programming. "BBC BASIC is a compromise between my advanced interpreter of the day and the BBC's desire to keep the language 'standard'," continues Wilson. "It felt significant at the time – a fast BASIC which was convenient to



» For all lovers of the BBC Micro – and a bit of extra publicity for Micro Power to boot.


» This symbol for the BBC Computer Literacy Project was found on all BBC Micros.

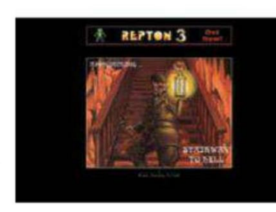
COMMUNITY – THE BEST BBC WEBSITES

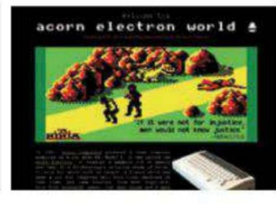
Stairway To Hell
www.stairwaytohell.com
The most vibrant BBC and Electron site on the web. It has an active forum, plenty of interesting articles and an excellent 'Lost & Found' section, telling all about recently unearthed gems. It also has scans and interviews aplenty, as well as links to emulators, clones and remakes of classic Acorn titles.

Acorn Electron World
www.acornelectron.co.uk
Disk images galore, including the archives of *EUG*, a disk-based BBC and Electron magazine which originated in 1991, chock-full of demos, reviews, utilities, remakes and originals. The site also contains demos and games from the BBC PD archives, as well as comprehensive scans of every issue of *Electron User*.

The BBC Games Archive
www.beebgames.com
Comprehensive site detailing almost every game released on the BBC. Thankfully, it's not just talk, though – there's also plenty to play, including unreleased games and demos. Particularly of note is the high-score section – think you can beat 1,026,690 for *Chuckie Egg*?

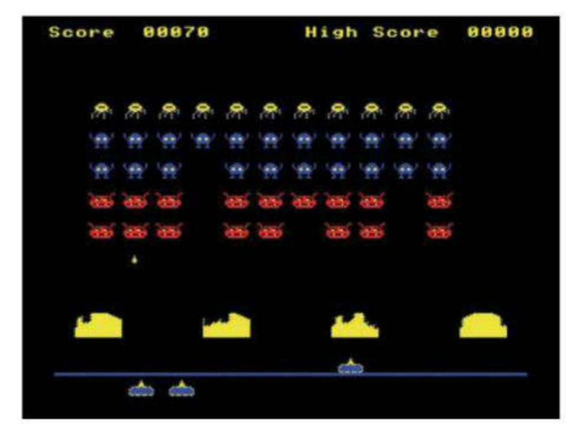
The BBC Lives!
http://bbc.nvg.org/
Sadly, it's been several years since this website was last updated, but The BBC Lives! remains a tremendous resource for would-be bedroom programmers, featuring, as it does, an awe-inspiring array of manuals and documentation, plus emulators, games, utilities and much, much more.



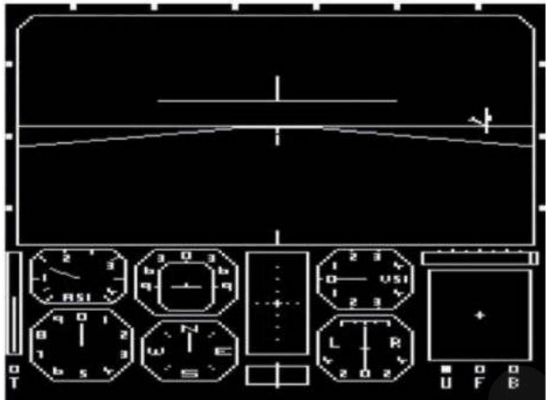
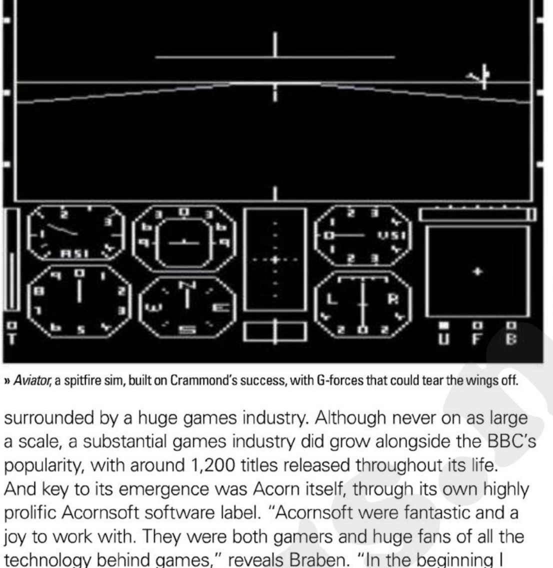








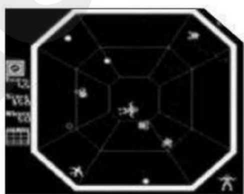
» Geoff Crammond's *Space Invaders* clone, *Super Invaders*, kick-started his involvement with the BBC.

» *Aviator*, a spitfire sim, built on Crammond's success, with G-forces that could tear the wings off.



» Fourth Dimension's *E-Type* – a conversion of its Archimedes title – was an excellent *OutRun*-style racer by Gordon Key, and was a welcome arcade alternative to the accurate simulation, that was *Revs*. However, released in 1990 – late in the BBC's commercial life – it was missed by many gamers who had already moved on to 16-bit machines.



» *Free Fall*, was an intriguing space-fighting game, by *Elite* co-author Ian Bell. Despite an excellent game engine, it was hampered by a slightly unwieldy control system, and was far too easy. It was often possible to leave the game running without any intervention, and your character wouldn't die for several minutes.

use, with many advanced features." Other innovations in the BBC included an interface known as The Tube, which enabled a second processor to be added to beef up the computer's power.

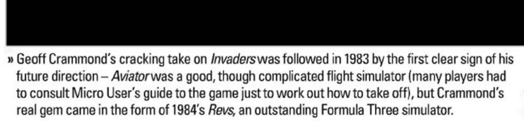
Thanks to the link-up with the broadcaster, the BBC computers were a considerable success in the education market. In addition, sales were bolstered thanks to an initiative started by the Department of Education and Science, which allowed local education authorities in the UK to obtain computers at discounted prices. While other computers were available under the scheme, the BBC Micro's established reputation as a tool for learning prompted many schools to buy Beeb. Throughout the Eighties, titles such as Acornsoft's *Podd* and 4Mation's *Granny's Garden* were commonplace in many primary and secondary schools.

The BBC branding soon showed itself to be as much curse as blessing, however, as the BBC Micro was soon seen as something that belonged in the corner of the classroom, a notion that was reinforced as Spectrum and Commodore computers emerged surrounded by a huge games industry. Although never on as large a scale, a substantial games industry did grow alongside the BBC's popularity, with around 1,200 titles released throughout its life. And key to its emergence was Acorn itself, through its own highly prolific Acornsoft software label. "Acornsoft were fantastic and a joy to work with. They were both gamers and huge fans of all the technology behind games," reveals Braben. "In the beginning I thought they set a great standard for everyone to have to live up to," adds Peter Johnson, the man behind hit titles such as *Overdrive* and *Impossible Mission*. "Most of their conversions were pretty accurate – things like *Planetoid* (*Defender*) or *Snapper* (*Pac-Man*) were great in their day."

"I saw BBC Micros at a local computer club, and was so gobsmacked by the speed and colourfulness of *Planetoid* that I decided I had to have one," says Jason Sobell, co-author of titles such as *Future Shock* and *Vindaloo*, "so I sold my Spectrum 48K to one of my college lecturers and went and picked up a shiny new 32K BBC Micro." An outstanding conversion of the arcade classic, the late Neil Raine's game was originally issued under the title of *Defender*, before Acornsoft succumbed to pressure from Wilson. "Some of the Acornsoft games, such as *Planetoid*, were the early pacesetters in my opinion," adds Richard Hanson, who encountered legal pressures of his own. Johnson's version of *Q*Bert* also hit the shelves under the original's title, without permission for the licence being sought. "It seems shockingly naive now," he says, "but in those days no one was particularly active in pursuing copyright in the home computer market. We had to pull it after around three weeks after a scary 'cease and desist' letter arrived." The short-lived conversion was released by Hanson's Superior Software, a company founded in 1982 that would eventually prove to be the most prolific software firm on the 8-bit Acorn scene. Hanson was a programmer



» The infamous *Barbarian* ad – featuring Page Three stunner Maria Whittaker alongside none other than Wolf from *Gladiators* – was blasted from many quarters, appalled that such filth could find its way on to their newsagents shelves. The controversy served only to make Peter Scott's excellent conversion a huge hit on both the BBC and Electron.

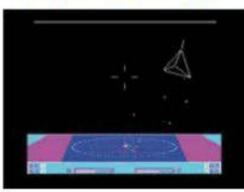


» Geoff Crammond's cracking take on *Invaders* was followed in 1983 by the first clear sign of his future direction – *Aviator* was a good, though complicated flight simulator (many players had to consult Micro User's guide to the game just to work out how to take off), but Crammond's real gem came in the form of 1984's *Revs*, an outstanding Formula Three simulator.



BBC MICRO

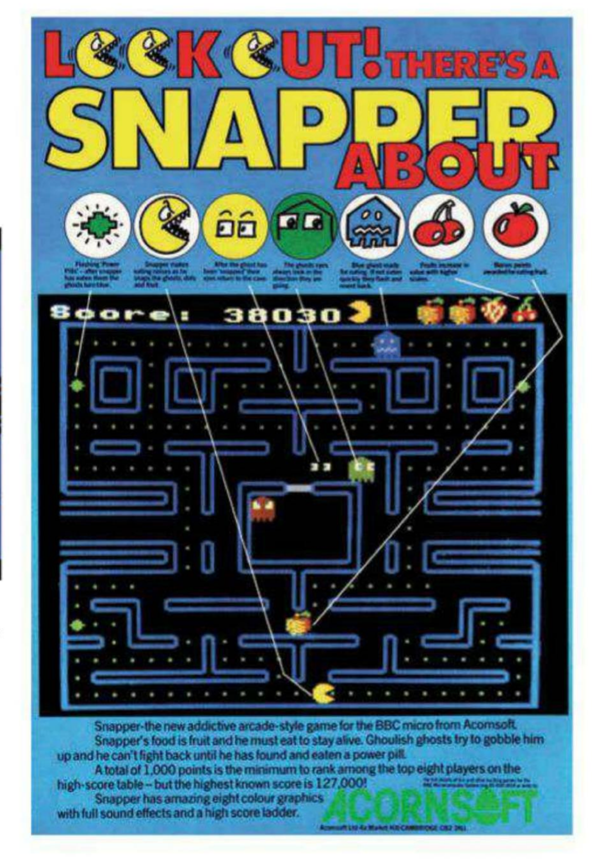




» Gremlin's *Starclash* was short-lived after obvious comparison's with *Elite*. In fact, legal action was threatened, and the game swiftly withdrawn from sale.



» Acornsoft was renowned for excellent arcade conversions, but the original version of *Pac-Man* clone *Snapper* was so faithful to the original that Acornsoft was forced to withdraw it and tweak the graphics. This led to the addition of a cowboy hat and legs to the main character, and the ghosts switched for limbed monsters.





» Orlando's super-smooth take on *Tempest* – an incomplete demo – was a substantial improvement on the version that hit the stands on the Superior Software label.

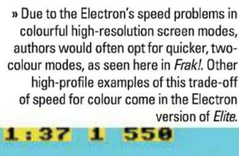
himself, and prior to starting his own label had written games for the Atom that were released by Leeds-based publisher Program Power (later became Micro Power) another major player in the BBC games market. During the early life of the BBC Micro, Acornsoft, Superior Software and Micro Power were the dominant players on the games scene.

The success of the BBC Micro was reflected in Acorn's profits, rising from £3,000 in 1979 to £8.6 million by July 1983. By that year, however, rivalry was intense in the home computer market, as Sinclair and Commodore had cultivated enormous games markets around their flagship machines. Sinclair's Spectrum 48K, in particular, was making enormous waves, and by mid-1983 was selling for under £130 (substantially less than the cost of the Model B). Acorn responded to the swiftly moving market by launching a cheaper sister machine to the BBC, in a move that would prove to be a seminal moment in the company's history.

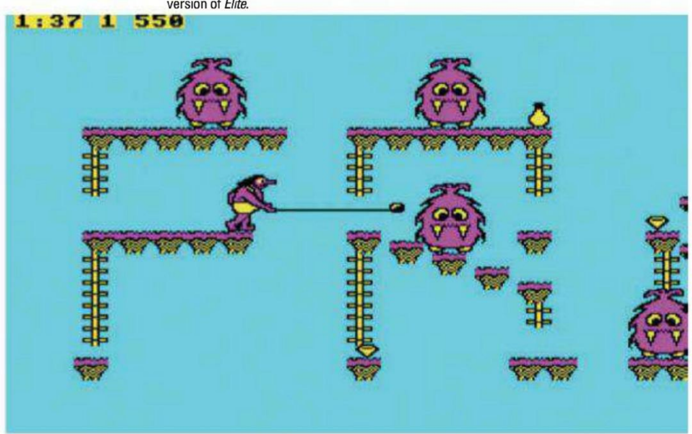
The Acorn Electron launched in August 1983 at a price of £199, a timing and pricing that was a direct attempt to tap into the Christmas sales market. Curry would once again be locking horns with former employer Sir Clive Sinclair. Substantially smaller than previous Acorn home computers, the Electron retained the 32K of the BBC Model B, but was slower and sacrificed much of the connectivity of its more expensive sibling. "I designed the case size out of a cardboard tissue box," says Wilson. "We didn't like what the first industrial designer came up with and needed a rebuttal." In spite of its cut-down nature, significant demand for the new model was courted by a high-profile advertising campaign, and everything appeared set up for Acorn to make inroads into Sinclair's share of the market.

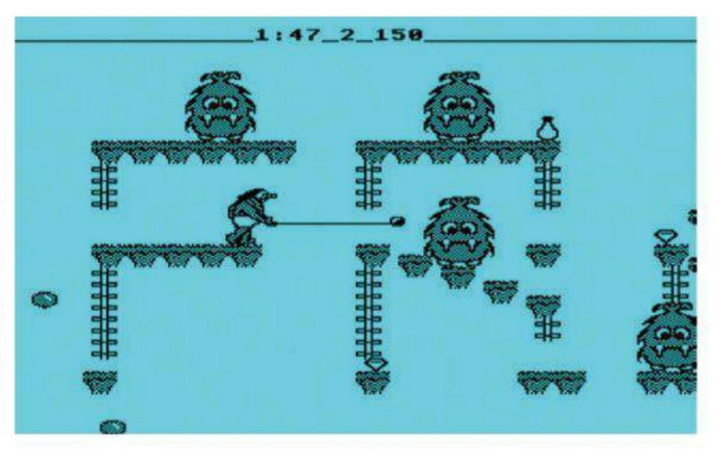
"The Christmas that wasn't" is how Wilson reflects on late-1983. Demand for the new model far outstripped supply (300,000 orders made, 30,000 machines delivered, according to one source), and the Electron's big chance to enter the market vanished as impatient parents opted for the readily available C64s and Spectrums as presents. Unfortunately for Acorn, by early-1984 the production problems were easing, but the original contracts drawn up with manufacturers were still being adhered to, meaning that the large numbers intended to be in shops for the previous Christmas were being delivered, but precious few customers were willing to buy them. An estimated quarter of a million Electrons were left unsold by the end of 1984, and the boom time of the previous few years was replaced with a time of great uncertainty at Acorn.

"The video hardware on the Electron was very poor compared to the BBC," says Braben. Indeed, the Electron suffered as the higher-resolution screen modes slowed the machine considerably in comparison to its older sibling due to the way in which the machine handled its CPU cycles. Sound was also an obstacle, with the new model featuring only one-track audio compared to the three tracks for music alone enjoyed by the Beeb. "The Electron would slow



» Due to the Electron's speed problems in colourful high-resolution screen modes, authors would often opt for quicker, two-colour modes, as seen here in *Frak!*. Other high-profile examples of this trade-off of speed for colour come in the Electron version of *Elite*.





```
You are in a curving east-west
corridor below indicator lights.
Exits lead east and west.
A clanking noise comes from the west
What now?
E
You are in a curving e/w corridor
beside a green door. Lights show
above it. Exits lead north (through a
door), east and west.
A black spherical Nightingale is
advancing from the west
What now?
E
You are in a curving e/w corridor
beside a blue door. Lights show above
it. Exits lead east, south (through a
door) and west.
A Nightingale is here! Its sperical
body divides to reveal syringes and
grabs. Then it reaches for you..
Sorry, you seem to be dead
You scored 50 out of 1000
Would you like to play again?
```

» The text adventure scene was vibrant on both the BBC and Electron, with titles such as the Robico's *Enthar Seven*, Epic's *The Lost Crystal*, Shard's *Woodbury End* and Larsoft's Quill-penned adventures including *Nine Dancers*. A grisly end meets the adventurer here in *Snowball*, one of a string of outstanding releases by the Level 9 label.

down occasionally when you made a sound," recalls Peter Scott, a prolific programmer of titles such as *Thunderstruck, Omega Orb* and *Ransack*. "Only having a single sound channel meant that the audio sounded choppy," adds Sobell, "and any background music was muted for every beep or gurgle in your gameplay."

"The differences between the hardware meant getting a game that really pushed the limits on both machines without the need for totally rewriting it for each was impossible," continues Scott. "I rarely used the hi-res, memory-hungry graphics modes that slowed the Electron down to a crawl. That meant my games ran at almost the same speed on both machines." Johnson agrees: "Superior wanted me to do *Overdrive* on the Electron for quite a while. It was only when they said, 'Okay, you've got to do it now – we've printed the cassette inlays', that I actually went away and wrote it. It only took about a week and a half. It wasn't very difficult."

Ian Bell is perhaps the bluntest about the machine: "I never really liked it as a computer," while Wilson adds: "The Electron wasn't a success. It should have been a year earlier." However, the Electron was supported by several software publishers, and many games were marketed as "BBC/Electron" titles, with either one version of a game compatible with both machines, or one version on one side of a cassette, and the other on the reverse.

A bad year for Acorn was offset by a vintage year for BBC games, and 1984 saw the arrival of two titles on the Acornsoft label, which acted as showcases for programmers whose names resonate not only across the Acorn 8-bit scene, but across gaming in general.

Geoff Crammond's association with the BBC began back in 1981 with *Super Invaders*, a super-smooth *Invaders* clone that is still immensely playable today. The first real clue to his future direction, however, came in 1983 with *Aviator*, a wireframe flight sim with an incredibly sophisticated physics-based engine. In 1984, it was followed by the stunning *Revs*, an outstanding Formula Three driving simulator that paved the way for Crammond's work on *Stunt Car Racer* and the *Grand Prix* series of games. *Revs* remained the outstanding racing title on the BBC throughout the computer's life, with only The Fourth Dimension's *E-Type* – released some six years later – as serious competition.

Bell and Braben's major contribution to the Acorn canon reverberates far and wide today. There are few formats in the Eighties and Nineties that weren't graced with a version of the classic space trading game *Elite*, a game that debuted on the 8-bit Acorn. "A lot of the games at the time were games made for a quick buzz, whereas *Elite* had a depth that meant the player was rewarded for their investment in playing the game," recalls Johnson.

"RIVALRY WAS INTENSE IN THE HOME COMPUTER MARKET, AS SINCLAIR AND COMMODORE HAD CULTIVATED HUGE GAMES MARKETS AROUND THEIR FLAGSHIP MACHINES"



» The choice that the Acorn Atom offered was heavily marketed at consumers.

OTHER VERSIONS – WHEN ONE MACHINE ISN'T ENOUGH...

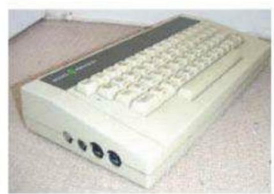
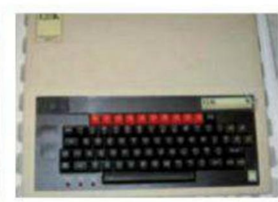
Acorn Atom
Acorn's first home computer, sold for £120 in kit form, or £170 fully assembled. The entry-level model had 2KB of RAM and 8KB of ROM. Generally considered a successful entry into the market, the machine had built-in Atom BASIC, but was criticised by Acorn's own technicians due to the MC6847 video chip it ran, which was NTSC-only.

Acorn Electron
Cut-down version of the BBC Model B, launched at £199 and aimed to impact on the Spectrum-dominated sub-£200 market. 'The Elk' was restricted to just one channel sound, and offered less connectivity than the BBC. Official upgrades, the Plus 1 and Plus 3, were released which gave the Electron more expansion ports.

BBC B+
An expanded BBC B featuring either 64KB or 128KB RAM, with prices starting at £499, this was almost identical to the BBC B in looks, except for a keystrip detailing the amount of RAM on board. The machines featured 32K standard memory, and the remainder was split between sideways (video) and shadow (extended) RAM.

BBC Master, Master Turbo, Master 512 and Master Compact
The final 8-bit Acorn machines, which ran on the streamlined 65C02 processor. The Master Turbo and 512 models shipped with second processors, but were otherwise identical to the basic Master. The Master Compact was fundamentally the same machine, but redesigned.

Collectables
A short-lived series of Business Computers was launched in 1984, all based around the B+, while a modified Electron linked to a speech synthesiser and a modem known as the British Telecom M2105 also surfaced. After the Olivetti takeover, BBC Masters were rebadged under the Olivetti name as the Prodest PC 128 S for the Italian market.



BBC MICRO

THE BBC HOMEBREW SCENE

The homebrew scene surrounding the BBC and Electron has always been strong, thanks to type-in games in the likes of *Electron User*, the pick of which found their way on to budget label Alternative's *Triple Decker* series. Since the death throes of the commercial games market for the Acorn machines, however, a small but determined group of fans have kept the flame alive. Recent commercially released titles such as Cronosoft's platformer *Egghead In Space*, and *Weenies*, a storming *Lemmings*-like puzzler, are well worth a look.

The best sources of material, currently, are to be found in the form of BBC PD and *EUG* (*Electron Users Group*). The pair have, over time, accumulated a quite astonishing array of utilities, artwork, musical compositions, demos, and a substantial number of full-blown games.

Standout titles include Peter Hatton's *Moonbase Beta*, an excellent platformer with a similar feel to Peter Scott's *Spycat*, and Lars Osterballe's collections of work, which take in impressive demos as well as games including shooter *Pantheon*. There are plenty of offbeat delights to be found, too, such as *Argument Sketch* (a port of a subgame featured in the Amiga title *Monty Python's Flying Circus*) and *You're Alan Partridge*, a quiz show for the Electron that supports Millsgrade Ltd's little-known Voxbox speech synthesiser for the machine.







"It created a real buzz everywhere," adds Scott. "People with other machines were, for the first time, jealous of BBC owners."

Like the best arcade games, *Elite* has not been short of imitators over the years, but one BBC title, *Gremlin's Star Clash*, written by Julian Bushell, met with gaping jaws upon release, such were the similarities. "It did look a little like plagiarism to me," says Braben. "I even saw a bug in it that I knew to be in *Elite*." With legal action on the cards, the game was swiftly withdrawn from sale.

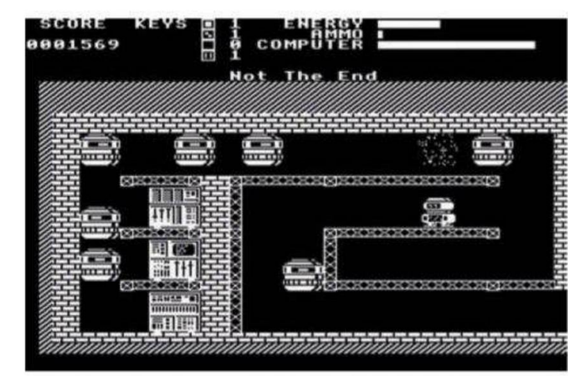
Also in 1984 came *Frak!*, a ladders and levels game from the pen of Orlando (aka Nick Pelling) based around a caveman armed with a yo-yo. While it was a great game, Pelling's finest moment for the Beeb came three years later in the form of the awesome *Firetrack*, one of the most outstanding 8-bit shoot-'em-ups on any platform. "We'd all await the latest game from Orlando with bated breath," says Scott. "That was the last really amazing technical achievement on the Beeb in my view, with beautiful scrolling and great gameplay." Other Pelling creations included the earlier shooter *Zalaga* – a fantastic port of *Galaga* – as well as another technical wonder *3D Pool*, which arrived late in the BBC's life. Most intriguingly, and a genuine rarity only recently unearthed, is a super-smooth development version of *Tempest* from 1986.

In spite of the problems at Acorn, development continued, and hard on the heels of the Electron came the BBC B+, which arrived in 64K and 128K incarnations. While the extra memory offered a clear improvement on the 32K machines, the new models suffered due to compatibility issues with some BBC B games, and a general lack of support. "Nobody really cared about the BBC B+," says Sobell. "There were thousands of BBC Bs out there, nobody was going to release a game that didn't run on that platform. I never really understood why the B+ was released." Never really anything more than a stopgap, the B+ did nothing to halt Acorn's financial woes, which reached crisis point in February 1985.

After fears that Acorn would be wound up altogether, Olivetti acquired a controlling share, and in early-1986, yet another BBC hit the shelves. A clear improvement on its predecessors, the BBC Master Series came with a minimum 128K, and although late onto a scene that was already graced by the 16-bit Atari ST and Amiga computers, the new model consolidated Acorn's position in the educational computing market. Later in the year came the Master Compact, as well as the Master Turbo and Master 512 (both of which shipped with second processors already installed). Few software houses supported the machines, although Superior Software did offer enhanced Master-compatible versions of some of its releases, including the highly acclaimed Master-only version of Elite. These machines would be the last major 8-bit computers Acorn produced.

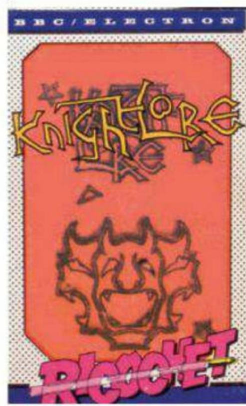
Following the launch of the Master series of machines, a long-running Acorn development project entitled ARM was soon to reach completion, resulting in the 32-bit Archimedes range. Acorn would continue to produce computers until the late-Nineties, and the Acorn brand was also revived in 2006, offering a range of notebook PCs.

Throughout the turmoil Acorn was facing, the games scene on the BBC and Electron was thriving. 1985 saw the birth of Superior Software's long-running *Repton* series of games, which would eventually yield its own powerful programming language, Reptol, released as part of the *Repton Infinity* package. "The *Repton* series of games has been Superior's biggest success story, selling over 125,000 copies in total," says Hanson. Other key Superior releases included Johnson's *Deathstar*, an excellent port of *Sinistar*, and *Barbarian*, one of many conversions Scott coded for the label, as well as the likes of *Thrust*, *Stryker's Run* (and its sequel *Codename:*



» This quality monochrome shooter was a fine budget title on the Bug Byte label, also home to such £1.99 classics as *Savage Pond*, *Hunkidory* and the four-player *Dunjunz*



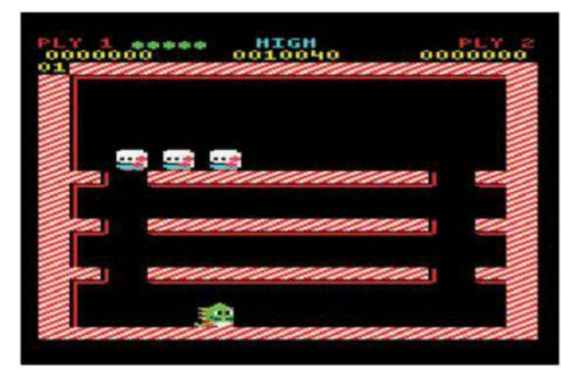


» Electron owners found themselves disappointed after buying this re-issue of Ultimate's classic. As with the original release, the game was incompatible with the machine, and the cassette in fact contained the BBC version on both sides.

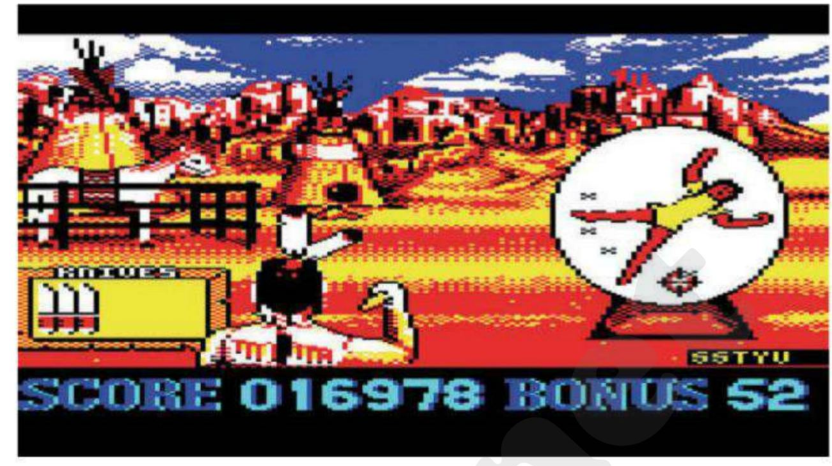




» Tynesoft's slick-looking *Ian Botham's Test Match* cricket game met with frustration from Electron users, after a coding mistake meant it was impossible to hit the ball. Programmed on a BBC, it made use of a memory location that didn't exist on the cut-down machine, and without adequate playtesting on the Electron, around four thousand copies ended up being returned. *Future Shock* featured guest appearances from characters that had appeared in previous Tynesoft titles, including the duck from *Ian Botham*, as well as Raj, star of *Vindaloo*.



» An unreleased conversion of *Bubble Bobble*, by Peter Gillett. Originally slated to be a 1989 release on the Firebird label, the slowing software market on the BBC made licences from other platforms that were less attractive to software houses.



» *Buffalo Bill's Rodeo Games*, a great example of the quality multi-event style games for which Tynesoft was renowned.

Droid) and *Ravenskull*. In 1986, Superior bought the rights to Acornsoft's back catalogue, and lavish re-releases of classic titles such as *Elite* soon followed. One of the most acclaimed BBC and Electron titles was Peter Irvin and Jeremy Smith's enormous space arcade adventure *Exile*, another Superior release. The game was another great success for the label and is often held up alongside *Elite* as the pinnacle of 8-bit Acorn gaming.

With Superior's rise to prominence came its long-term rival Micro Power's fall from grace. The label had a string of excellent titles to its name, with fine ports of *Qix* (*Frenzy*), *Mr Do!* (the outstanding *Mr Ee!*) and *Donkey Kong* (*Killer Gorilla*). Micro Power's defining moment came with Michael St Aubyn's puzzle-based platformer *Imogen*. Unfortunately, ambition got the better of the publisher in the form of Gary Partis's *Doctor Who And The Mines Of Terror*.

The final words on the mainstream BBC and Electron software scene rest back with Superior Software, though, whose unwavering support of the market continued well into the Nineties, long after most had either folded or moved on to more powerful platforms. Scott's miraculous conversion of *Sim City* is a highlight, topping off a period where he was rightly dubbed 'the conversion king' in reference to quality conversions of offbeat games such as *Hostages* and *Ballistix*. Superior's *Play It Again Sam* series of compilations had begun with repackages of its own titles, but would soon take in games from a whole host of publishers including Aardvark (Orlando's *Zalaga*), Tynesoft (*Winter Olympiad 88*) and Electric Dreams (Firetrack). "We asked other software companies



» An early ad campaign from Micro Power.

"IN 1985 THE GAMES SCENE ON THE BBC AND ELECTRON WAS THRIVING, ESPECIALLY WITH THE BIRTH OF SUPERIOR SOFTWARE'S LONG-RUNNING REPTON SERIES"

An enormous arcade adventure, it utilised a special ROM chip, the production of which contributed to the company's financial problems, which eventually caused them to fold.

Following Micro Power's demise, Newcastle-based label Tynesoft came to prominence. Multi-event games such as *Commonwealth Games, Indoor Sports* and *Circus Games* all sold well, while original titles such as Jason Sobell and Kevin Blake's platformer *Future Shock* displayed a programming flair as good as anything on the scene at the time. The Tynesoft story ended abruptly when a sister company ran into financial trouble and took the software house down with it. The final blow, however, was an arson attack that destroyed the company's offices. "My immediate thought was 'how convenient'," recalls Sobell. "I believe they found that someone had poured some flammable substance into the drains then set it alight, and that all records, contracts and financial details were destroyed..."

whether they would like some of their games to be included on the compilations," recalls Hanson, "and almost all of them were keen on the idea". In addition, previously unreleased titles such as *Arkanoid* clone *Hyperball* and platform puzzler *Qwak* started to appear. "They were games that we felt deserved to be released," adds Hanson, "but possibly weren't strong enough to warrant individual release." Superior Software later became Superior Interactive, and today produces PC versions of such BBC classics as *Repton, Galaforce* and *Ravenskull*, with more on the way, including *Stryker's Run* and *Quest*. The BBC may well be dead, but its spirit definitely lives on.



» As well as a raft of excellent conversions, the BBC and Electron were also home to big-selling disappointments such as this two-colour take on the Atari classic.



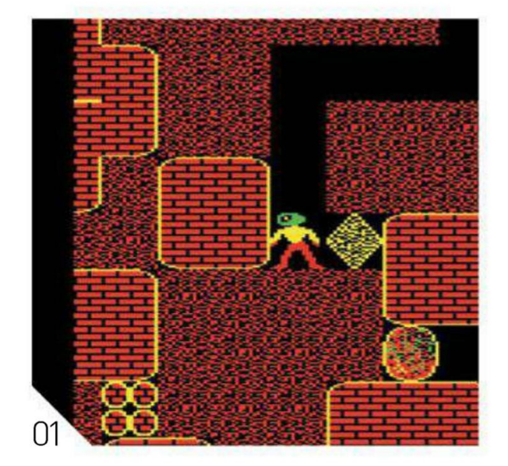
» *Cute To Kill*, one of the best shooters released on the Beeb, was a little-heralded title on the Mandarin label.



BBC COMPUTER

PERFECT TEN GAMES

It may have sat proudly in schools around the country, but Acorn's BBC wasn't just an edutainment machine. There were plenty of amazing games available for it, as the following two pages prove



01

REPTON

» **RELEASED:** 1985

» **PUBLISHED BY:** SUPERIOR SOFTWARE

» **BY THE SAME PUBLISHER:** STRYKER'S RUN

01 ***Repton* was a brilliant take on *Boulder Dash* (although, it's far too methodical to be considered a true clone) that still remains as fresh as a day-old daisy.** All the more impressive when you consider that it was put together by a 15-year-old coder. It's amazing to think that the classic *Repton* is now a staggering 22 years old. It seems like only yesterday that we were taking the mickey out of Chris Talbot because his parents had bought him a computer that the rest of us only used at school, while we all played on our Spectrums, CPCs and C64s. Still, Chris had the last laugh, as *Repton* was a great little puzzle game ideally suited to the BBC. It also proved rather popular, selling 125,000 copies between 1985 and 1990.

GRANNY'S GARDEN

» **RELEASED:** 1983

» **PUBLISHED BY:** 4MATION

» **BY THE SAME PUBLISHER:** FLOWERS OF CRYSTAL

02 **It may have been seen as a simple educational title, designed to help children become accustomed to using computers. However, in retrospect, *Granny's Garden* was so much more than that.** "Ha ha! Now I've got you! I will send you home at once." If you've never heard the previous chilling phrase, then you've obviously never experienced the terrors of *Granny's Garden*. Yes, the abrupt endings to your journey are as frustrating now as they were back in 1983. And those annoying dragons are still the bane of your life, but no other education title on the Beeb has been able to pair learning and fun so successfully. An utterly charming adventure gaming experience.



02

IMOGEN

» **RELEASED:** 1986

» **PUBLISHED BY:** MICRO POWER

» **BY THE SAME PUBLISHER:** KILLER GORILLA

03 ***Imogen* is easily one of the BBC's most ambitious games, along with *Elite*, *Citadel* and *Exile*. It proved that 8-bit titles could have massive amounts of depth.** Although it starts off looking like just another simple platformer, you soon discover that *Imogen* is littered with ingenious game design and extremely clever puzzles. You're rewarded with immense satisfaction once you've finally worked them out, too. A simple icon system was also in place to handle specific tasks such as talking, while your wizard's ability to change into two distinct forms – a cat and a monkey – enhanced the clever puzzles no end and continually opened up the immense game world.

CYLON ATTACK

» **RELEASED:** 1983

» **PUBLISHED BY:** A&F SOFTWARE

» **BY THE SAME PUBLISHER:** CHUCKIE EGG

04 **Few space shooters on the BBC – and there are plenty – match the majesty of this offering from A&F Software.** *Cylon Attack* required you to fly through space shooting down a set number of aliens (which looked suspiciously like some of the spaceships from *Battlestar Galactica*). Initially, docking at the end of each stage to refuel was sufficient. However, later levels would become so intense that extra trips to the filling station were required in order to withstand the vicious onslaught. Unfortunately it lacks the huge level of depth that's found in *Elite*, but if you're all about the blasting, then *Cylon Attack* offers a far more suitable alternative.

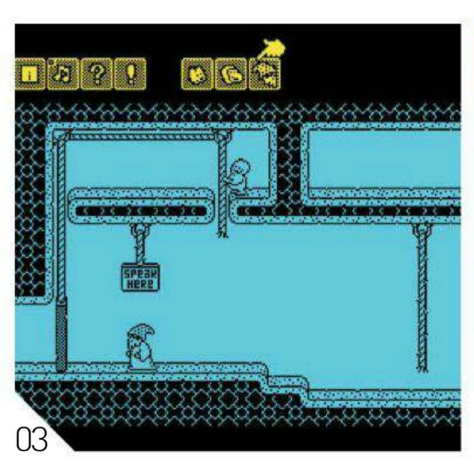
MR EE

» **RELEASED:** 1984

» **PUBLISHED BY:** MICRO POWER

» **BY THE SAME PUBLISHER:** ADVENTURE

05 **There have been countless conversions of the classic *Mr Do!* on a variety of systems ranging from the SNES to the Neo Geo. But hardly any of them have managed to capture the magic of the original arcade game.** Amazingly though, Adrian Stephens did it successfully when he created *Mr Ee*. His clone is a scarily accurate version of Universal's original. Armed with no more than a power ball, Mr Do!, sorry, Mr Ee must scuttle around the mazes either collecting a set amount of cherries or killing all the monsters to continue. It's not arcade perfect, but it's arguably the greatest conversion of the game that's available.



03

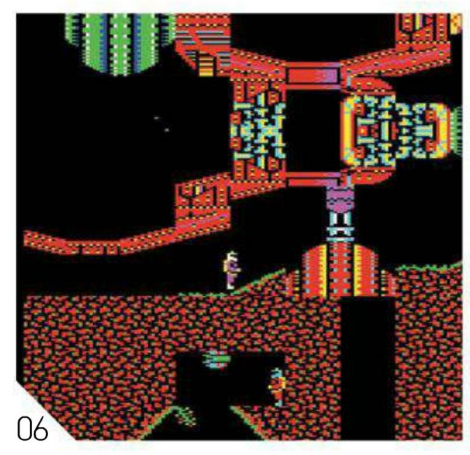


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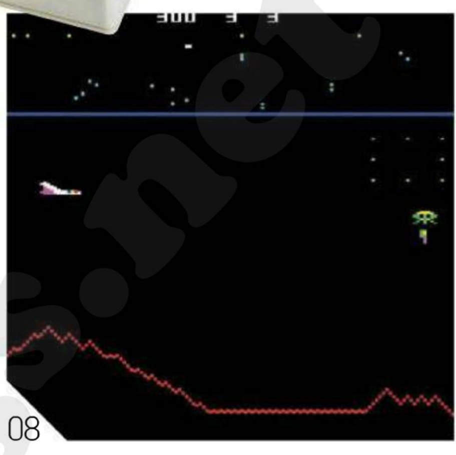
05




06



07


08

EXILE

» **RELEASED:** 1988

» **PUBLISHED BY:** SUPERIOR SOFTWARE

» **BY THE SAME PUBLISHER:** CODENAME: DROID

06 When we consider the amount of scorn that the BBC receives on our very own forum, it makes us wonder if the haters have ever actually played on one outside school. Even the briefest play of *Exile* is enough to know that it's something very special. And as your spaceman infiltrates the planet Phoebus, it continues to impress, mainly due to its superb physics, massive game world and clever game mechanics. With its beautiful looking visuals, masterful use of sound and those aforementioned physics, *Exile* is quite possibly one of the most complex adventures that the BBC ever received. A true classic.

CITADEL

» **RELEASED:** 1985

» **PUBLISHED BY:** SUPERIOR SOFTWARE

» **BY THE SAME PUBLISHER:** PALACE OF MAGIC

07 Similar to *Imogen, Citadel* proves that first looks can definitely be deceiving. Again, it is a title that appears to be nothing more than a simple platformer. While there are plenty of platforms and objects to jump on and over, *Citadel* is actually a sprawling (it's over 100 screens in size) graphical adventure. Featuring plenty of devious puzzles that require a fair amount of head scratching in order to solve them, it'll certainly keep you intrigued. With its bold, bright visuals, pre-game digitised speech and the opportunity to play as either a girl or boy, *Citadel* stands proudly apart from its BBC peers and remains one of the machine's greatest moments.

PLANETOID

» **RELEASED:** 1982

» **PUBLISHED BY:** ACORNSOFT

» **BY THE SAME PUBLISHER:** SNAPPER

08 Another great clone. If you're unable to tell by looking at the accompanying screenshot (why are you even reading this mag?) *Planetoid* was Acornsoft's answer to Eugene Jarvis's *Defender*, and pretty good it was, too. Faster than an amphetamine-fuelled cheetah, *Planetoid* was an intense conversion that looked the business and boasted the gameplay to match. It was Acornsoft's second arcade conversion and instantly proved a hit thanks to those fast-moving visuals and its challenging gameplay. It was originally called *Defender* but the name was dropped due to legal reasons, thankfully the same thing didn't happen to the actual game…

09

LORDS OF TIME

» **RELEASED:** 1983

» **PUBLISHED BY:** LEVEL 9

» **BY THE SAME PUBLISHER:** DUNGEON ADVENTURE

09 There are a large number of brilliant text adventures on the BBC, but this is arguably one of the best. It features a band of evil time lords (no relation to Doctor Who) who are doing their best to alter and change history, so Father Time has asked you to stop them. Set across a variety of different time periods, *Lords Of Time* is a compelling adventure game that will cause your brain to go into overload, as you try to follow the constantly twisting plot and solve its intricately designed puzzles. With its well-written story, clever parser and crafty puzzles, *Lords Of Time* is a wonderful example, proving that you don't need elaborate visuals to tell an entertaining story. If you do plan on picking it up then make sure that you track down Level 9's *Time And Magik* compilation as it also features *Red Moon* and *The Price of Magik*.

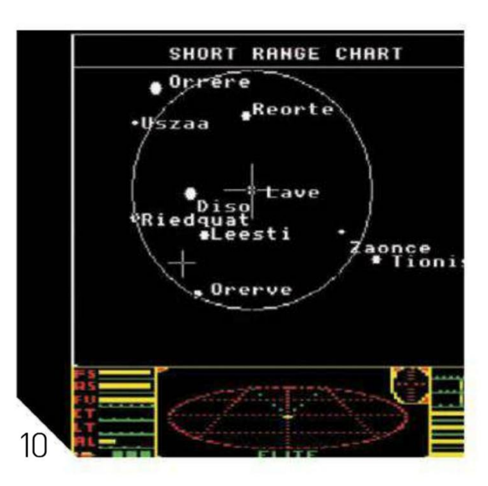
ELITE

» **RELEASED:** 1984

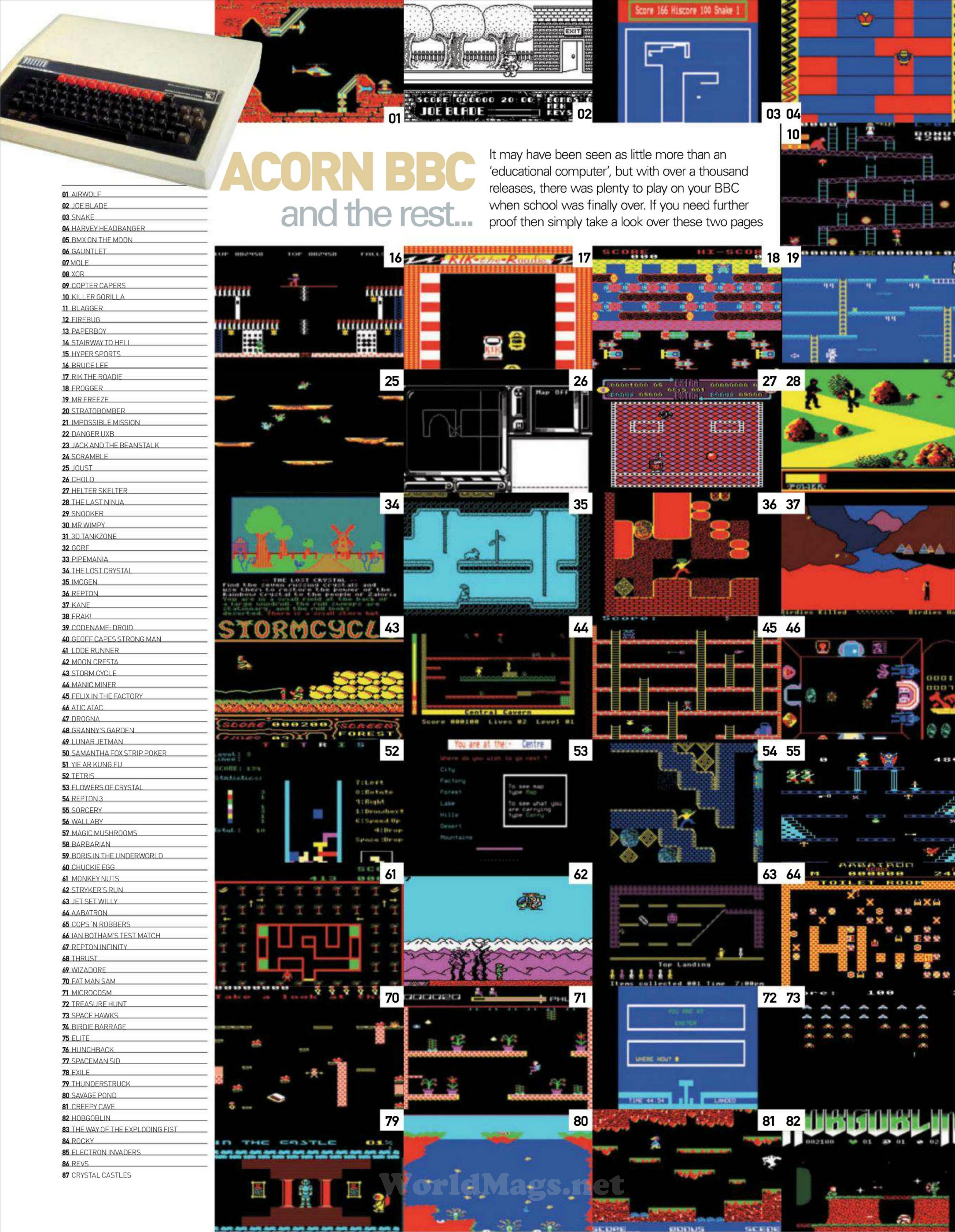
» **PUBLISHED BY:** ACORNSOFT

» **BY THE SAME PUBLISHER:** LABYRINTH

10 Oh come on, did you really think we'd do a BBC top ten and not include the mighty Elite? We'd have been hung up and lynched by BBC owners everywhere. Created by David Braben and Ian Bell, (at the time, two undergraduates from Jesus College in Cambridge), *Elite* is still seen by many as the definitive space trading game, a title it arguably deserves. Braben and Bell's game is absolutely huge in scope and its open-ended gameplay and advanced looking visuals soon meant that it was ported to a staggering variety of home systems and consoles. Even now, homebrew updates continue to get made, and Braben is insistent that an *Elite IV* is definitely on the way. Until that actually happens though, you'll just have to make do with one of the greatest games to ever appear on Acorn's humble machine.



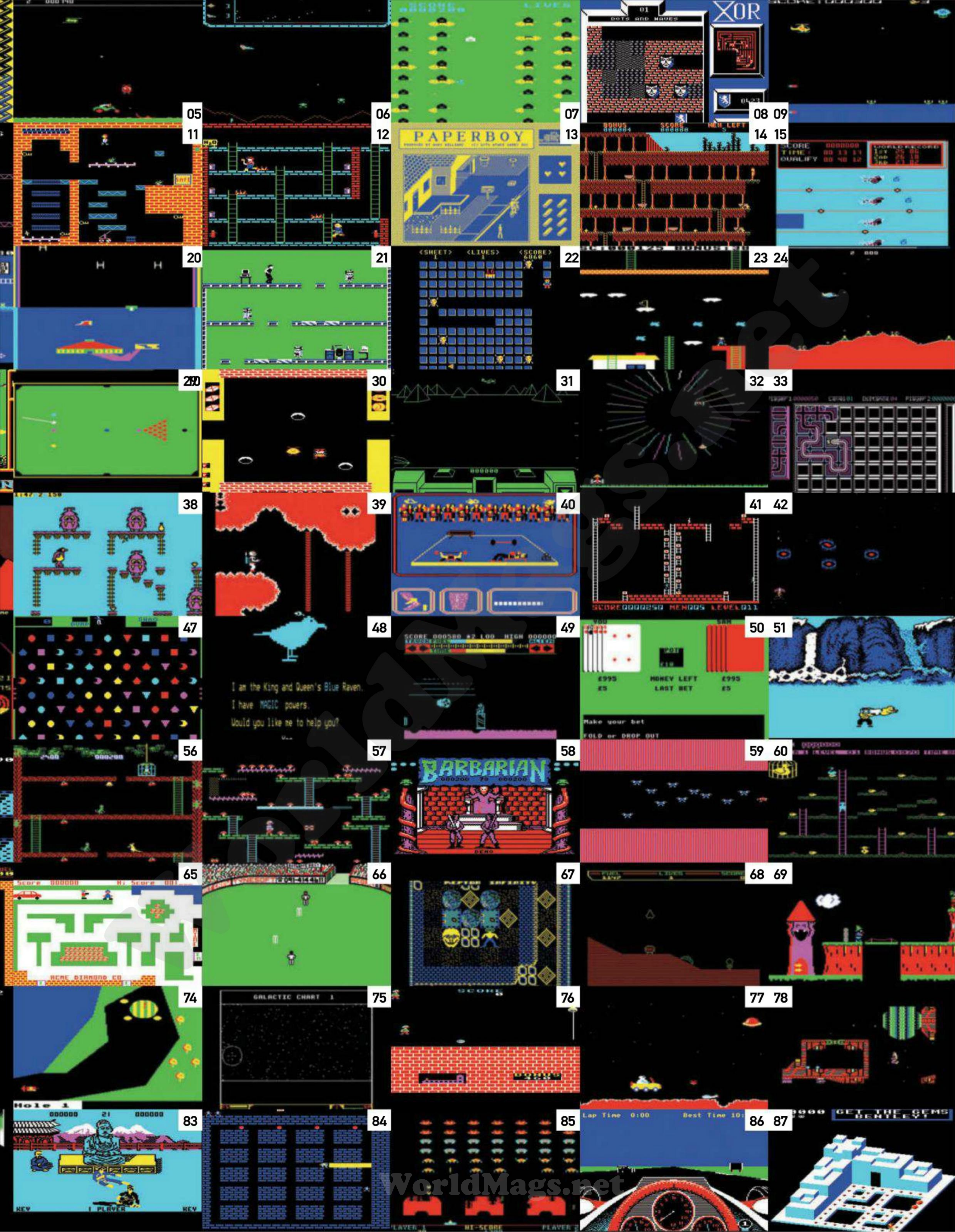
10



ACORN BBC and the rest...

It may have been seen as little more than an 'educational computer', but with over a thousand releases, there was plenty to play on your BBC when school was finally over. If you need further proof then simply take a look over these two pages

01 AIRWOLF
02 JOE BLADE
03 SNAKE
04 HARVEY HEADBANGER
05 BMX ON THE MOON
06 GAUNTLET
07 MOLE
08 XOR
09 COPTER CAPERS
10 KILLER GORILLA
11 BLAGGER
12 FIREBUG
13 PAPERBOY
14 STAIRWAY TO HELL
15 HYPER SPORTS
16 BRUCE LEE
17 RIK THE ROADIE
18 FROGGER
19 MR FREEZE
20 STRATOBOMBER
21 IMPOSSIBLE MISSION
22 DANGER UXB
23 JACK AND THE BEANSTALK
24 SCRAMBLE
25 JOUST
26 CHOLO
27 HELTER SKELTER
28 THE LAST NINJA
29 SNOOKER
30 MR WIMPY
31 3D TANKZONE
32 GORF
33 PIPEMANIA
34 THE LOST CRYSTAL
35 IMOGEN
36 REPTON
37 KANE
38 FRAK!
39 CODENAME: DROID
40 GEOFF CAPES STRONG MAN
41 LODE RUNNER
42 MOON CRESTA
43 STORM CYCLE
44 MANIC MINER
45 FELIX IN THE FACTORY
46 ATIC ATAC
47 DROGNA
48 GRANNY'S GARDEN
49 LUNAR JETMAN
50 SAMANTHA FOX STRIP POKER
51 YIE AR KUNG FU
52 TETRIS
53 FLOWERS OF CRYSTAL
54 REPTON 3
55 SORCERY
56 WALLABY
57 MAGIC MUSHROOMS
58 BARBARIAN
59 BORIS IN THE UNDERWORLD
60 CHUCKIE EGG
61 MONKEY NUTS
62 STRYKER'S RUN
63 JET SET WILLY
64 AABATRON
65 COPS 'N ROBBERS
66 IAN BOTHAM'S TEST MATCH
67 REPTON INFINITY
68 THRUST
69 WIZADORE
70 FAT MAN SAM
71 MICROCOSM
72 TREASURE HUNT
73 SPACE HAWKS
74 BIRDIE BARRAGE
75 ELITE
76 HUNCHBACK
77 SPACEMAN SID
78 EXILE
79 THUNDERSTRUCK
80 SAVAGE POND
81 CREEPY CAVE
82 HOBGOBLIN
83 THE WAY OF THE EXPLODING FIST
84 ROCKY
85 ELECTRON INVADERS
86 REVS
87 CRYSTAL CASTLES


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77 78
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85
86 87
XOR
DOTS AND WAVES
PAPERBOY
BONUS
SCORE
MEN LEFT
QUALIFY
WORLD RECORD
(SHEET)
(LIVES)
(SCORE)
I am the King and Queen's Blue Raven.
I have MAGIC powers.
Would you like me to help you?
MONEY LEFT
LAST BET
Make your bet
FOLD or DROP OUT
BARBARIAN
DEMO
ACME DIAMOND CO
GALACTIC CHART 1
SCORE
Hole 1
1 PLAYER
Lap Time 0:00
Best Time 10:
GET THE GEMS BENTLEY!
HI-SCORE

BATMAN

NAH-NAH, NAH-NAH, NAH-NAH, NAH-NAH, BATMAN!



- **PUBLISHER:** OCEAN
- **RELEASED:** 1986
- **GENRE:** ISOMETRIC ADVENTURE
- **FEATURED HARDWARE:** AMSTRAD CPC
- **EXPECT TO PAY:** £1



HISTORY

All praise Bob Kane and Bill Finger, for if it wasn't for these talented artistes we may never have experienced the excellence that was *Head Over Heels*.

In case you weren't aware, Kane and Finger co-created the classic DC Comics superhero Batman, who was then turned into a rather fetching gaming superhero in an isometric platformer by Jon Ritman and Bernie Drummond, which in turn formed the basis for *Head Over Heels*. Still, we've done that par-isometric classic to death, so let's instead focus our attention on Ritman's *Batman*.

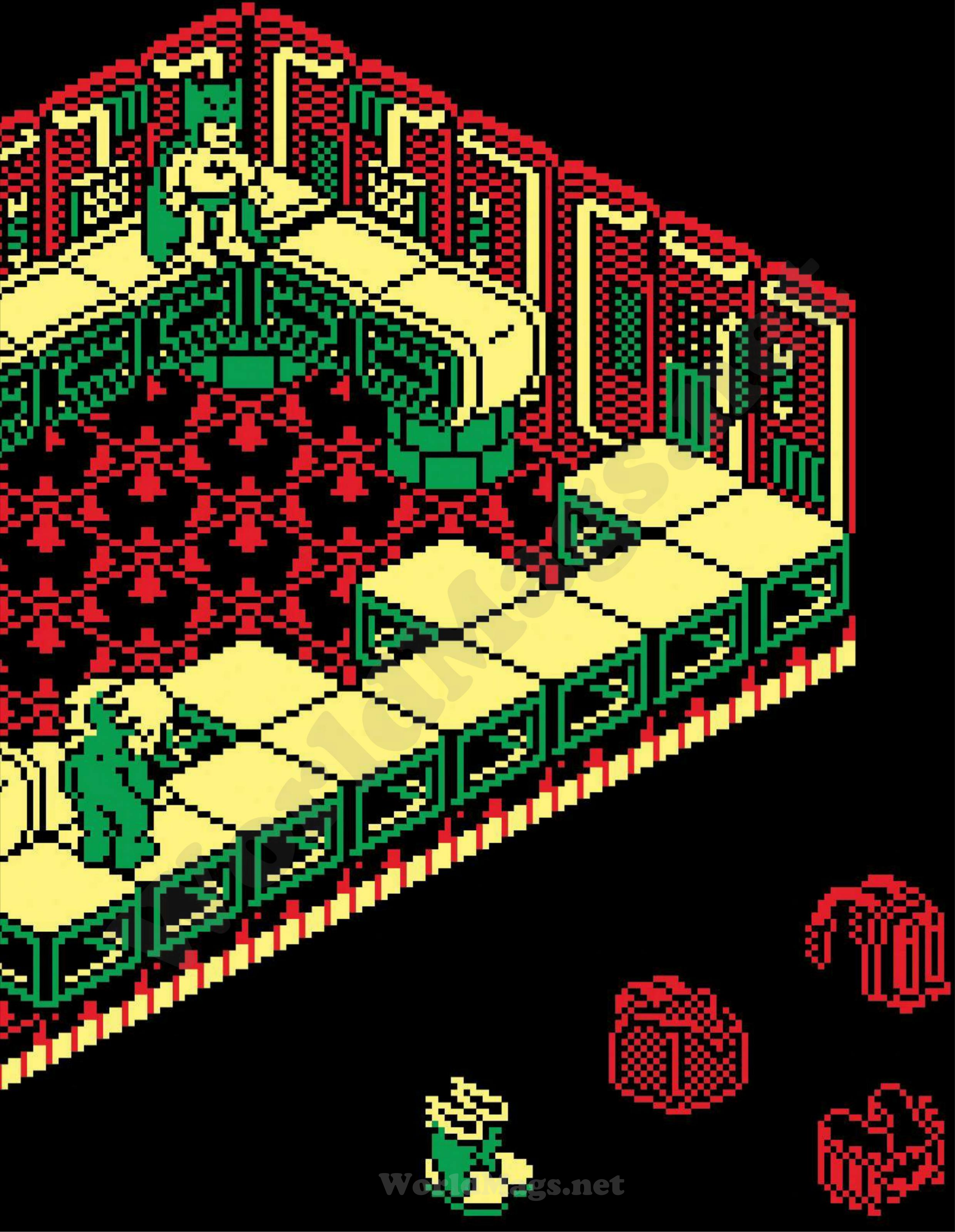
Ocean's first licensed *Batman* game not only marked Ritman's first isometric adventure, but also the first time – of many – that he would team up with friend-of-a-friend Bernie Drummond.

With no pressure from Ocean or DC Comics, Ritman allowed his mind to run rampant, and while there were no cameos from the likes of the Joker, Penguin or Riddler, there were plenty of bizarre-looking enemies to avoid and smart puzzles to solve.

Before Batman could concentrate on recovering the missing pieces of his Batmobile, his first task was to collect four handy items that would make his final task that little bit easier. The Bat Boots allowed the portly one to jump, the Bat Bag enabled him to pick up certain objects, and the Bat Thruster and Low Gravity Belt slowed your rate of speed while falling and allowed you to change direction.

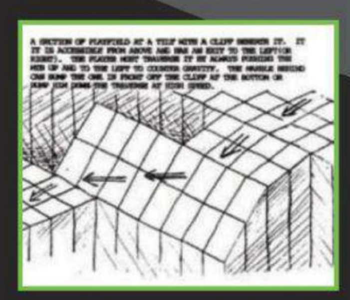
Of course, once you had found the above items, your quest was only really beginning, and certain parts of the Batmobile proved incredibly tricky to secure. Thanks to its finely tuned gameplay, sparkling visuals and cleverly designed puzzles, *Batman* never became a chore to play, and while it wasn't as large as *Head Over Heels*, it still took a fair amount of time and skill to complete.

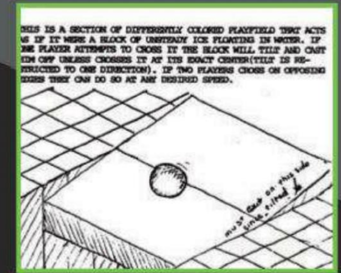
We've included a shot of the Amstrad version here, mainly because it's the most colourful of the 8-bit outings, but whichever format you eventually plump for, you'll be in for a brilliant time.

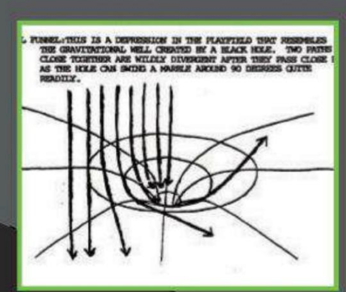


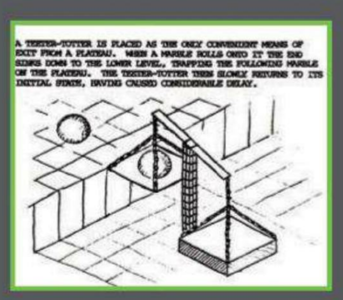
THE MAKING OF...

MARBLE MADNESS



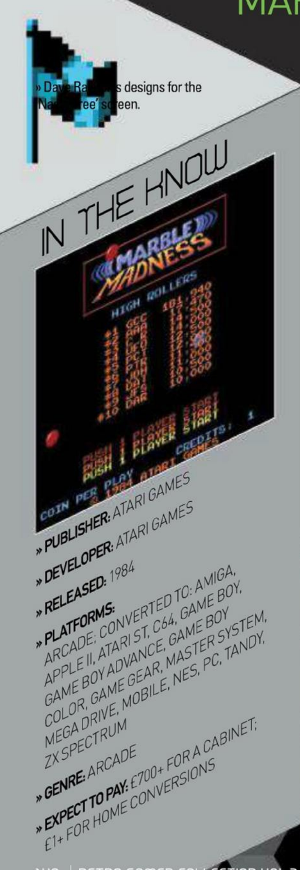






ONE OF THE MOST DISTINCTIVE ARCADE TITLES EVER, MARBLE MADNESS MARRIES ESCHER INFLUENCES WITH CLINICAL ABSTRACTION IN ITS PRECISE LANDSCAPES. BUT BENEATH ITS SURFACE IS A COMPELLING RACE AGAINST TIME. CRAIG GRANNELL TALKS TO DESIGNER MARK CERNY ABOUT HIS MUCH-LOVED CREATION

» Dave Ra s designs for the Ne ree' screen.



IN THE KNOW

» **PUBLISHER:** ATARI GAMES
» **DEVELOPER:** ATARI GAMES
» **RELEASED:** 1984
» **PLATFORMS:** ARCADE, CONVERTED TO: AMIGA, APPLE II, ATARI ST, C64, GAME BOY, GAME BOY ADVANCE, GAME BOY COLOR, GAME GEAR, MASTER SYSTEM, MEGA DRIVE, MOBILE, NES, PC, TANDY, ZX SPECTRUM
» **GENRE:** ARCADE
» **EXPECT TO PAY:** £700+ FOR A CABINET; £1+ FOR HOME CONVERSIONS

The Atari Games of the early-Eighties was a tough place to be. You had to come up with your own game concepts, each offering a distinct experience, preferably with new controls, the thinking being that unique systems – *Missile Command*'s buttons, *Tempest*'s spinner – drew in players. Also, the deteriorating economics of American arcades meant that new games required a simultaneous two-player mode. "My assignment was to put these things together – a unique concept, new controls, and a two-player game," explains Mark Cerny, an avid arcade gamer who'd managed to find his way to Atari at the tender age of 17.

Contrary to widely reported but totally inaccurate rumours about him winning a design contest to work at Atari, Mark actually arrived at the company via a reporter writing a book on arcade game tips. "He hooked me up with Atari's VP of product design. For some reason, Atari thought a teenage hobbyist programmer would make a nice addition to the company's staff," remembers Mark, who was keen to work on arcade games, due to consoles of the time being limited in terms of graphics and controls.

According to Mark, the original inspiration behind *Marble Madness* – a game that, when stripped back, essentially tasks players with guiding a marble through six treacherous courses against the clock – was miniature golf. "I loved the idea of a playfield's contours influencing the ball's path, and I spent evenings working on various approaches with Atari's art system, before settling on the idea of using an isometric grid," remembers Mark. Next, a decision needed to be made regarding what players would do on the playfield: "I floated the concept of hitting the ball, like in miniature golf, but that didn't get anyone too excited, and so I started thinking about a racing game, with long tracks and a human or computer-controlled opponent."

When it became obvious that the technology of the time couldn't adequately cope with the physics for such a game, the concept morphed into a race against time, pitting the player against tricky courses and obstacles. "The two-player idea integrated well with this – we just needed to double up the controls and have the trailing player 'killed' and transported forwards, with a time penalty, to join the leading player," says Mark. "But the final requirement – unique controls – was hard to come up with."

Eventually, Mark decided to go with a motorised trackball, which could spin faster if the ball was rolling downhill, or slow down the ball if braked. Unfortunately for Mark, however, prototypes fell foul of what Atari's design department referred to as the 'milk stool' problem. "A trackball is supported on three spots – two rotate and a third is a passive support," explains Mark. "Three supports means stability, like with a tripod, but when you want to motorise a trackball, you need a fourth support – two for rotation and two for driving motors. At this point, the mechanism becomes enormously



» For a bonus, accomplished players can leap off the angled ramp in this shot, landing at the far left.

finicky. Think of a four-legged table or stool – everything needs very careful placement for it to be stable, and one leg often makes poor contact."

In the end, the motorised trackball proved unfeasible and costly, and the idea was dropped. However, the standard trackball remained, something Mark considered vital to the success of the project. With only two of the three primary objectives for *Marble Madness* – a new concept and a two-player game – now being met, Mark had his work cut out to ensure the resulting product was up to scratch.

Along with Bob Flanagan, Mark began programming the game in C – a first for Atari Games, which had previously used assembly language. "Using C meant the game was easier than usual to program, although with C being a less efficient language, *Marble Madness* only ran at 30Hz rather than the usual 60," recalls Mark.

Despite the ease of programming, Mark had big plans for the game's hardware, the intention being to base *Marble Madness* around a powerful custom chip. "It was supposed to have exotic new features like RAM sprites, where a few sprites could be bitmaps animated by the CPU, rather than the usual ROM-based static sprites," says Mark. "This was exciting, and I thought I could have the steel marbles reflect the environment and the players' marbles show a refracted version." Unfortunately, the hardware used ended up being the fairly conventional and rather unfortunately named 'Budget System', with standard ROM sprites.

Other ambitious ideas also fell by the wayside. "I had an idea about animated playfields, with a 'wave' chasing the player, like something coming at you from under a carpet," recalls Mark. "But that turned out to be extremely difficult to implement, and after a month I gave up."

But as is so often the case, limitations proved to be beneficial. Forced to simplify, Mark crafted a visual design that's pure and timeless. "Escher was a huge influence – four of his prints were on the walls of the house I grew up in," Mark reveals. "But the game's graphic design also reflects my limited art skills – it was something that could be calculated rather than drawn." Rather than drawing levels pixel by pixel, Mark hit upon a pre-rendered solution and wrote a simple ray-tracer that generated the playfields from a height map. "Since the playfields were generated offline, I could do quite a bit of computation to generate them," he says. "That meant I could anti-alias them, for a softer look, and I could have shadows, which added an extra dimension to the game's visuals."

Mark's level generator also left extra time for designing and experimenting with components and obstacles for each level. "Given the difficulties of implementing content in those days, it was easier to come up with track concepts than to

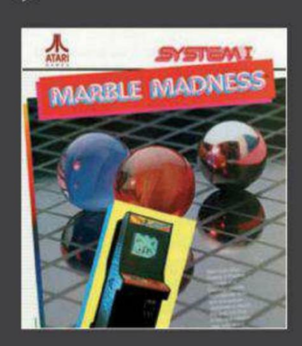
PRETENDERS TO THE THRONE

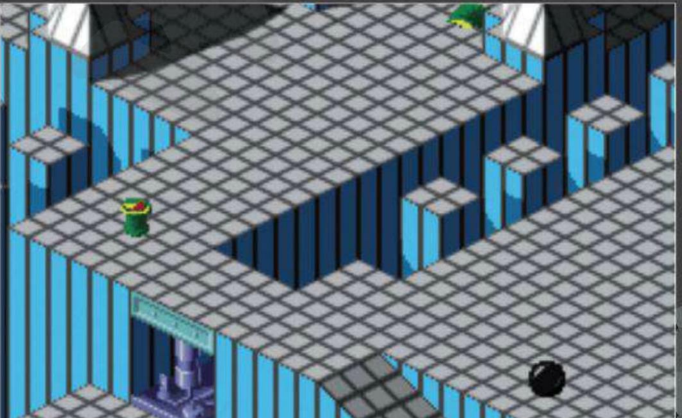
Gyroscope (1986)
The first clone out of the blocks, Melbourne House's effort met with a mixed reception. It's not bad, especially on the Speccy, but its courses aren't nearly as devious as Cerny's creations.

Spindizzy (1986)
Crossing *Marble Madness* with an arcade adventure and a block of granite ('cos it's so hard, see?), Paul Shirley's game made reviewers all happy in their 'funny' places – *Zzap!64* gave it 98%.

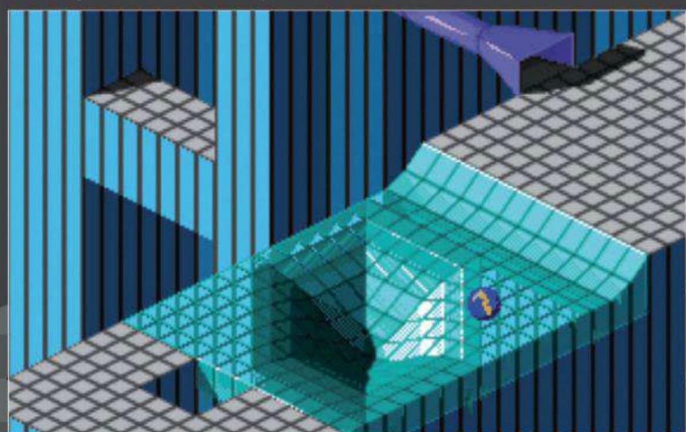
Super Monkey Ball (2000)
Despite tilting the landscape rather than moving the marble, Sega's simian adventure owes a debt of gratitude to Mark Cerny, and its popularity was no doubt down to finely tuned analogue controls and treacherous courses.

Marble Blast Gold/Ultra (2003/2006)
This pair of titles are almost *Spindizzy* crossed with *SMB* (so, *Marble Madness* twice or thrice removed, or something), offering plenty of marble, er, madness, in a rich and vibrant hazard-strewn landscape.





» Level 2 introduces the psychotic black Steelies and slug-like marble munchers.



» One of the game's visual treats and its first major test: the ice at the end of Level 2.



CONVERSION CAPERS

ZX Spectrum (1986)
Available in original and 'deluxe' flavours, the Speccy and CPC conversions offer a construction kit. Unfortunately, they also offer ropey collision detection, poor visuals, and irksome flick-screen scrolling with instant deaths that mirrors *Jet Set Willy*. Avoid.

Amiga (1986)
One of the best coin-op conversions of its era, the Amiga release wasn't eclipsed for five years. Although the aesthetics are on a par with the original, it's the gameplay that really shines through in this version, largely due to the analogue control options.

PC (1986)
Awarded 79% by a presumably drunk *Games Machine* team in 1987, this dreadful effort marries nasty CGA graphics with a hateful keyboard control scheme, topping it off with spindly courses and audio that's less pleasing than fingernails down a chalkboard.

Game Boy (1991)
Squeezing the coin-op into Nintendo's black-and-white handheld was never going to be an easy task, but this monochrome conversion is surprisingly playable, if a mite frustrating at times, due to its small view area and occasionally iffy collision detection.

Mega Drive (1991)
Despite its digital-only controls, this conversion is fairly close to being arcade-perfect, pipping the Amiga release in terms of visuals and sound. Difficulty and control options add to a decent package for anyone wanting a home version of Cerny's classic.

Game Boy Advance (2005)
Amazingly, 2005's GBA conversion, released in a double pack with *Klax*, is the worst of the lot. Upon playing, you might think something's missing, and you'd be right: Steelies, animations and three entire levels have been cut from this lamentable effort.

» [C64] The C64 conversion has a secret water level that even Mark Cerny was unaware of. It's two-player only and stupidly hard, however.

actually make them. Many ideas remained on paper in various design documents," responds Mark, when we ask how he approached level design for *Marble Madness*. "Practicality was the biggest issue when it came to choosing ideas to implement. For example, it wasn't possible to make a good-looking elastic barricade that stretched across the playfield. Also, my interests drifted during the course of the project, and so new ideas – such as Level 4's vacuum cleaners – were used, rather than something from the design documents."

With the game's diminutive enemies – evil black marbles that are referred to as 'Steelies', slug-like marble-munchers, roaming acid pools, and more – things were different. These were down to Sam Comstock, who Mark refers to as "a talented artist who could have animated anything." Due to sprite limitations, the enemies had to remain small, and Mark recalls that the one other definite rule was 'no faces': "The thinking was something that could have character, but not actually be a character. I thought a minimal aesthetic would match the playfields, hence the lack of eyes and heads for the creatures."

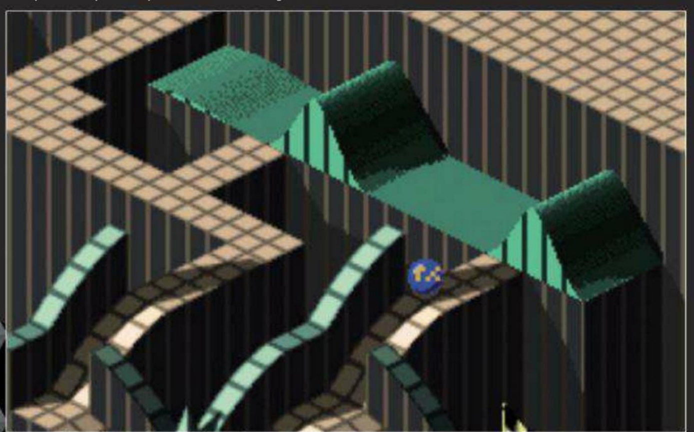
A final touch was added to the game via its jaunty tunes. Although Mark had nothing directly to do with the game's sound, he nevertheless seems proud of it. "The music is great, isn't it?" he beams. He notes that *Marble Madness* used an FM chip by Yamaha, and this was a first for Atari Games and perhaps even the coin-op industry as a whole. "The game's sound designers, Brad Fuller and Hal Canon, spent months investigating the ins and outs of the chip," he adds, noting that our favourite composition – for the Beginner level – was the first the pair created.

As *Marble Madness* neared completion, in-house focus tests suggested it was a winner, which met with relief from its creator: "I'd been at Atari for nearly three years by then, and the reaction to most of my work was, er, lukewarm. So it was really nice to see players get into the game." The games-playing public also flocked to the new creation, and several thousand machines were shipped, although the game's lack of longevity soon became apparent. "In those days, success and failure were based on game length – if a typical game lasted two-and-a-half minutes: success! A minute longer: failure! So, a 'simple to learn, hard to master' mechanic meant players got reasonable value for their first coin, but couldn't play on without plenty of practice," says Mark. "With most games, income tended to be high and drop off as players mastered them and got more time for their money, but with *Marble Madness* being only four minutes long, players eventually finished the six stages and moved to other games," he explains. "In our post-publication tracking, we watched *Marble Madness* be the number-one-earning game in all 18 arcades we sampled,

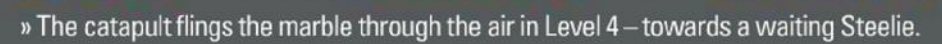
» Roaming acid pools catch an unwary marble, although this can make progress faster, rather than you waiting for gaps.



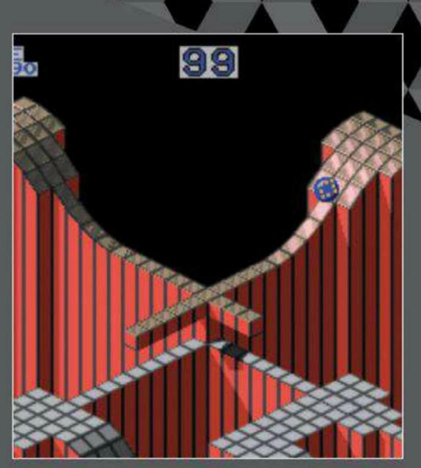
» Players need speed and precision to beat the magnetic wave at the end of the Level 3.







» The catapult flings the marble through the air in Level 4 – towards a waiting Steelie.



» Scared of heights? You'd best stop before the start of Level 4, then.



» Hammer time! Dah dah dah dah – dah daaaah! Break it down!

and simultaneously drop out of the top spot in week seven. Most cabinets were then retrofitted to play other games."

It's this one aspect Mark would address, given the chance to go back: "In retrospect, I wish the game could have been longer. Once the core technology was in place, such as the marble physics and the ray-tracer, it didn't take much time to make a level." Unfortunately, more levels would have required a time extension and an increase in board costs, due to further playfields requiring larger ROMs. "It might have been possible to increase the board cost, but the time extension would have been a non-starter, even if I'd had the confidence and foresight to ask," reckons Mark. "Atari Games was in severe financial trouble, and if *Marble Madness* hadn't shipped on schedule, the factory would have been completely idle."

Despite the slight nature of the game, *Marble Madness* nonetheless struck a chord with gamers, due to its mix of precision gameplay, devious level design and beautiful aesthetics. Its immediacy and brevity still make it an ideal pick-up-and-play title, and this combination of factors no doubt led to the many home conversions. It also nearly led to a sequel in the Nineties: the little-known *Marble Man*. "That project was spearheaded by Bob Flanagan, but the game didn't have the same minimalist aesthetic," says Mark. "In place of acid pools and the like, it had enemies such as a knife and fork – and a giant tomato! Also, Bob used joysticks to save money, but this type of game doesn't work well without a trackball – the gameplay really isn't the same."

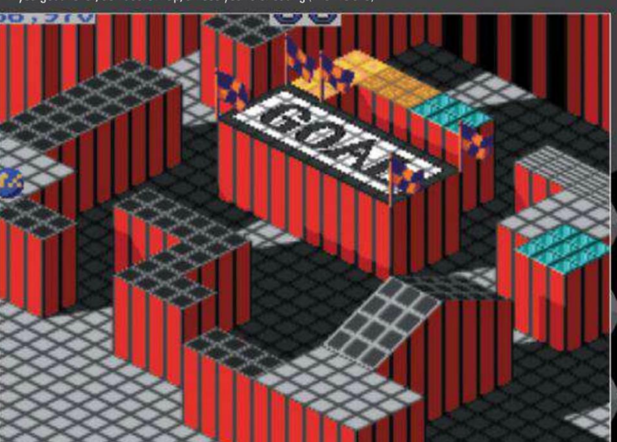
Mark had no input into the cancelled sequel, because he'd long since left Atari Games. "Making coin-ops was brutal," he reasons. "You had to pretty much finish a game to see how much income it could earn, and only one in three games earned enough to be manufactured – the other two were tossed out." Instead, Mark headed to Sega, making games for home consoles, the technology for which now satisfied his desires. "I can't say I've really looked back – I'm still consulting in the industry and making games for consoles," he says. "You work hard, the game goes on sale, and you take your lumps. Reviews and sales might be good or bad, but someone sees the result of your work, and that's a great feeling – maybe the best in the world!"

"I loved the idea of a playfield's contours influencing the ball's path, and I spent evenings working on various approaches with Atari's art system, before settling on using an isometric grid"

» Revenge is sweet – squish mini-foes in Level 5's playpen for extra seconds.



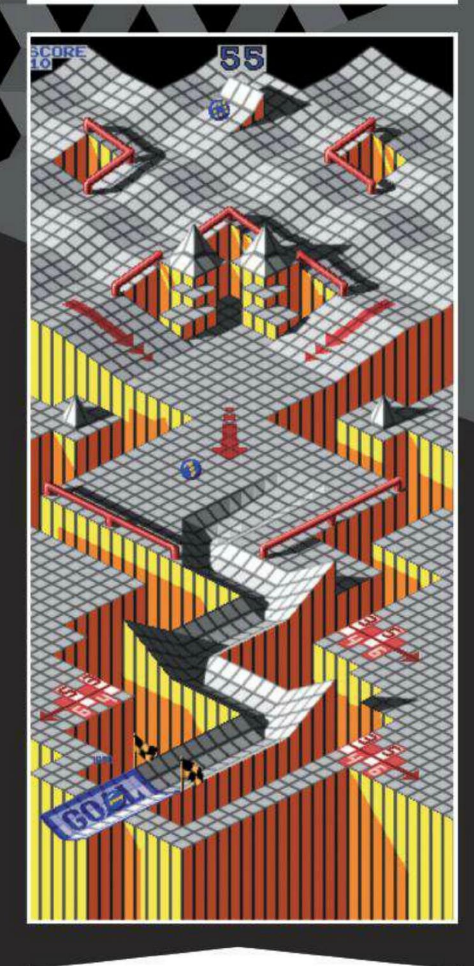
» If you get this far, don't screw up, unless you're cheating (like we are).

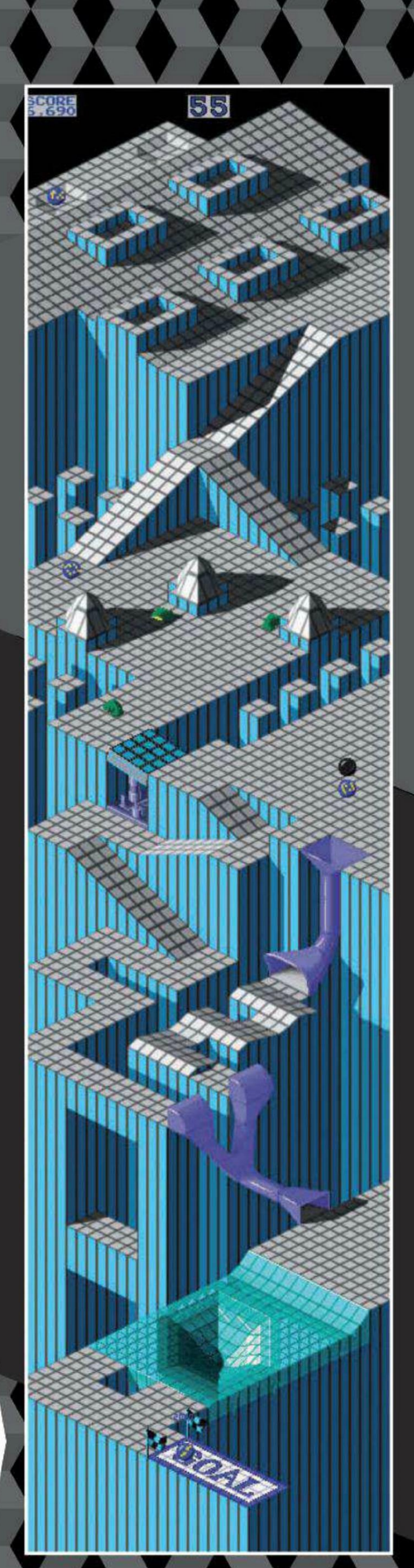


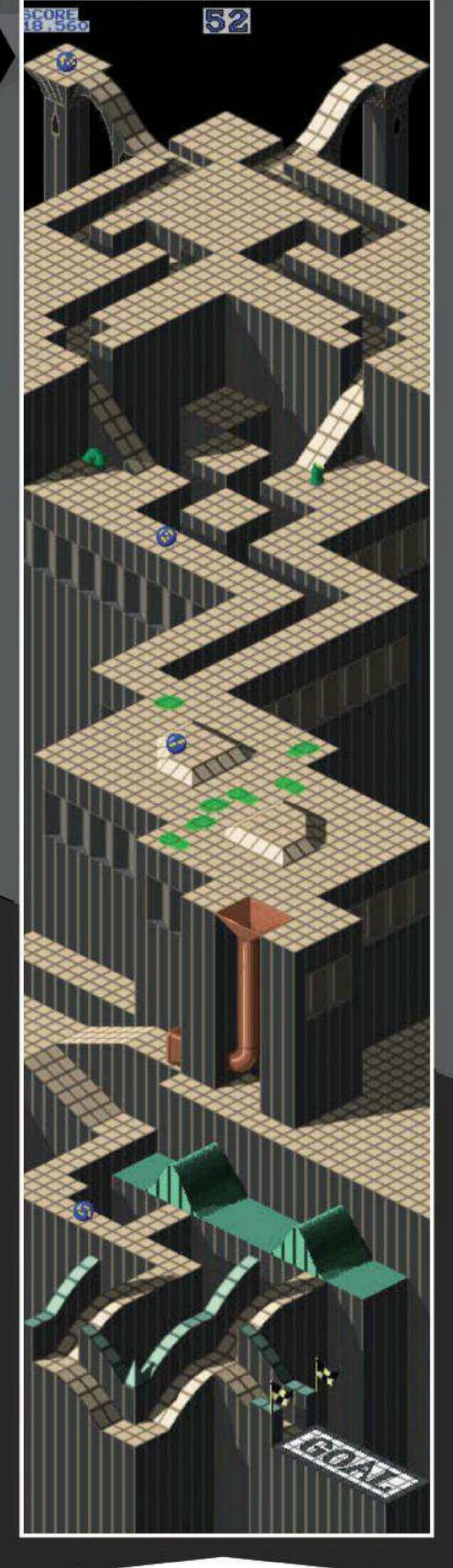


ON THE LEVEL

Mark Cerny takes us through each level of his game, explaining his thinking behind various obstacles and adversaries, unearthing a few little-known secrets, and reflecting on how well the game works.



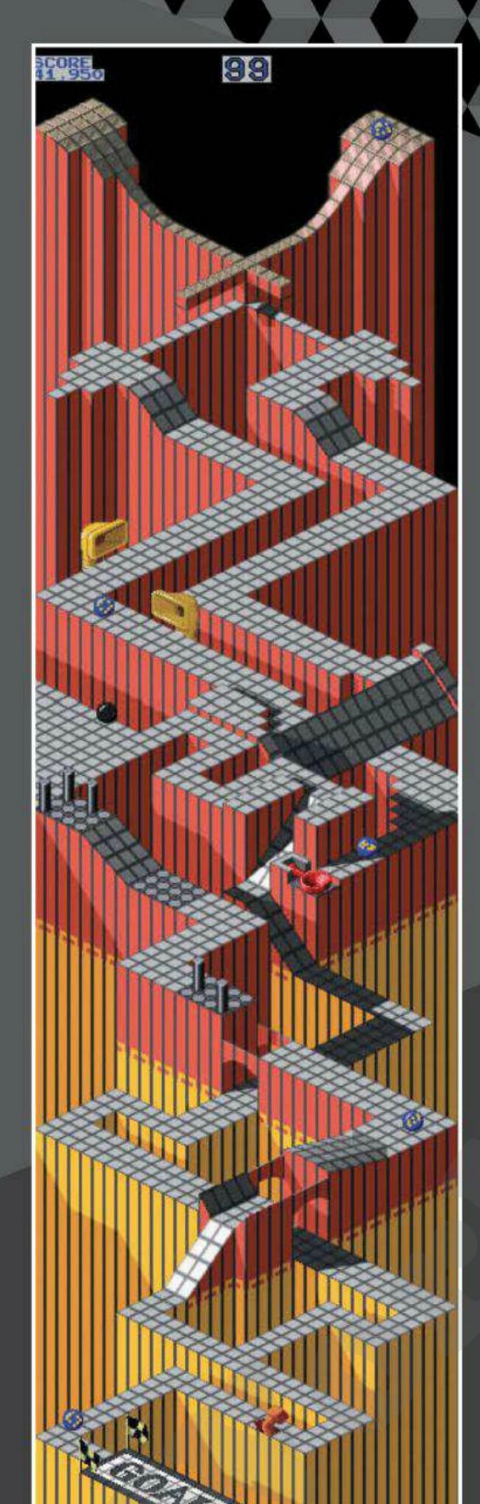




Practice
"The practice level was intended to be a short introduction to the controls and concept of the game," says Mark. "But since you have to traverse it every time you play, it was suggested that there be a secret or a challenge of some sort. I added two spots where you can jump a gap and get some points, but I have to say the replay value isn't high!" That said, success on this level can make or break a game – if you're too slow here, you'll run out of time later.

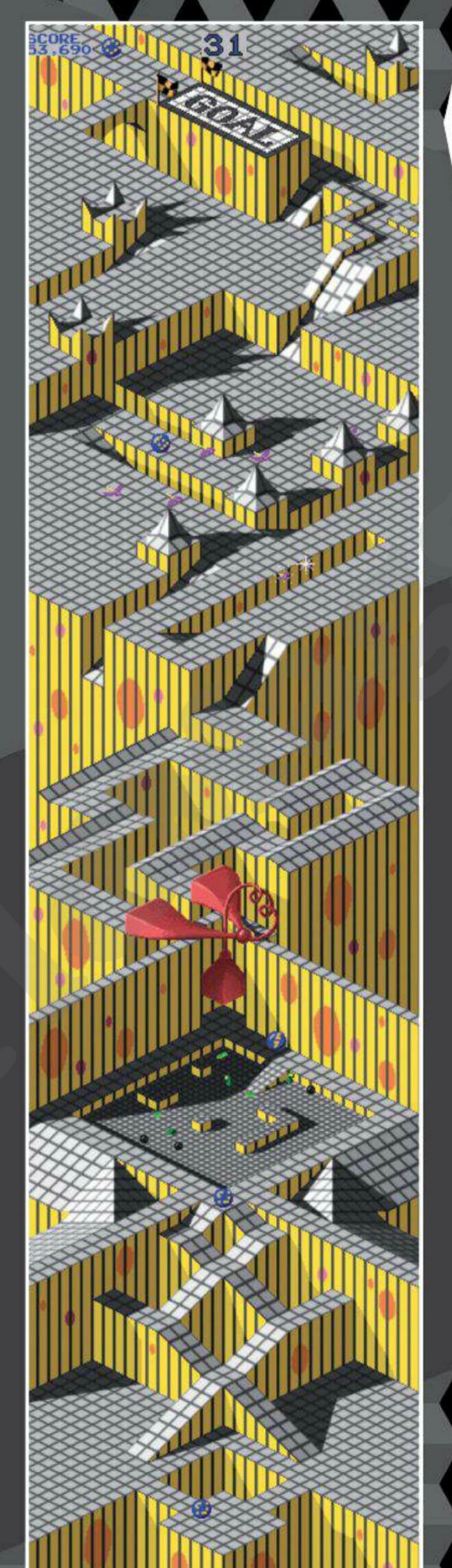
Beginner
The second level has the game's first enemies – green marble munchers and your nemesis Black Steelie, an aggressive black marble whose sole purpose is to knock you for six. The landscape is also harder to traverse, including narrow pathways, pipes and a huge ice patch. "The ice patch geometry was hard to craft," says Mark. "I was thinking it should have a 'black hole dimpling the fabric of spacetime' kind of look, but the graphics wouldn't come together and the marble motion was basically random with that much curvature. What you see here is the fourth try."

Intermediate
Level 3 adds deadly acid and a wave obstacle. "That's my animation – I was trying to sharpen my art skills," says Mark. "It's not as polished as the other enemies – the ones the professional did – but I don't think many players noticed." This level also has unintended short cuts: "You can avoid the narrow channels at the beginning by jumping off the start platform."



Aerial

"Overall, this level is nice, but perhaps there's a bit too much random death," says Mark of what's possibly the game's most maddening level. "You can't really time the catapult launch to avoid the Steelie, and so sometimes even the best players die here. Also, the rods and hammers are completely random." Of course, there's also another obstacle to deal with before meeting those adversaries: vacuum cleaners that suck in unwary marbles. "At the time, I worried they didn't fit the rest of the game, but looking back they seem just fine," considers Mark.



Silly

Polka-dot patterns and surreal elements greet players that make it this far. "I thought 'how can all the rules be broken?' And, thus, the 'silly' level was born," says Mark. Reversed gravity makes things tough, and psychotic purple birds are hard to avoid, but there is a silver lining, as Mark explains: "There's a playpen of sorts a third of the way up the level, where you can chase miniature versions of the game's enemies – and you get a time bonus for each one you smush!"

Ultimate

"The final level had to be nearly impossible. We knew that some would finish it and try to improve their time, but most would stop playing, so this level was as hard as we could make it," says Mark. "It also has different surfaces: frictional ones to slow you down, corrugated ones that impede motion in a certain direction, and a glowing one that accelerates you."



Many thanks to Bernhard Kirsch (bodenstaendig.de/marble/) for supplying the *Marble Madness* level maps, and Dan Hower (arcadeflyers.com) for the flyer scans.

WHY YOU MUST PLAY...

ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

IT HAS ONE OF THE LONGEST NAMES IN VIDEOGAME HISTORY, WACKY VISUALS AND GREAT ROBOTRON-STYLED GAMEPLAY, SO WHY DOES NO ONE CHAMPION IT?



» *Escape*'s arcade version has some brilliantly cartoon-style graphics.



» Fans of the SAM Coupé will be pleased to know that it also features a great conversion of *Escape*.



» Paying homage to old B-movies gives *Escape* and its story a real sense of fun.

Often requiring insanely quick reflexes and great hand-eye co-ordination, run-and-gun games can be extremely satisfying to play, and when pulled off correctly – in the case of *Robotron: 2084, Gunstar Heroes, Metal Slug* – also offer an injection of adrenalin that few other genres can match. This article is our chance to redeem one of the greatest and funniest shooters that you're ever likely to play: Tengen's utterly bonkers Escape From The Planet Of The Robot Monsters.

Essentially a homage to the corny B-movies of old, Atari Games' title is an insane romp, that, while not without its problems, will ensure that you're always playing it with a huge smile stretched across your face. Indeed, it's the nutty humour that really adds to the overall experience, and you'll be laughing with delight as Jake and Duke go about their hilarious animation routines. Walking into walls, hanging in empty air before falling off a ledge, or getting sucked up by the level-shifting 'Port-O-Matic' is all in a day's work for the intrepid rescuers, and it helps give the coin-op a unique charm and style that few other games of the era were able to match.

For all its humour, however, *Escape From The Planet Of The Robot Monsters* is a surprisingly tough blaster – more so on the middling home conversions that appeared – and you're either going to have to have the skills of a god, or incredibly deep pockets if you ever intend to reach the game's final screen.





BOSCONIAN
Version Featured: Arcade
Year Released: 1981



ROBOTRON: 2084
Version Featured: Arcade
Year Released: 1982



SMASH TV
Version Featured: Arcade
Year Released: 1990



ZONE 66
Version Featured: DOS
Year Released: 1993



SUPER STARDUST
Version Featured: Amiga
Year Released: 1994



MUTANT STORM RELOADED
Version Featured: Xbox Live Arcade
Year Released: 2005



GEOMETRY WARS: GALAXIES
Version Featured: Wii
Year Released: 2007

THE CONVERSIONS

1. COMMODORE 64
Amazingly, while the C64 is easily the ugliest 8-bit version, it ends up being the most fun to play, simply because it doesn't suffer from the Speccy and Amstrad's naff control system. Like the other 8-bit versions it lacks the insane amount of on-screen enemies that the coin-op boasts, but at least it's easy to control.

2. AMSTRAD
While its slick, cartoony visuals easily manage to mimic the excellent graphics of the arcade game – making it the best looking 8-bit conversion – this Amstrad effort is just too fiddly to play. Ultimate-style controls may be fine for slower-paced games like *Knight Lore* and *Alien 8*, but they're no good in a shoot-'em-up.

3. AMIGA
Thank God. The Amiga port, like the C64 outing, uses traditional control methods to move Jake and Duke. This is very handy, as the number of enemies has been ramped up, and the game now offers a more significant challenge than the 8-bit versions. Throw in some excellent music and presentation and we have a winner.

4. SPECTRUM
The monochrome visuals and fiddly controls don't do it any favours, but this is a very faithful port of the arcade original, even if the levels have been cut down and it's missing the racing sections. Animation is well-drawn though and it all cracks along at pace. If only there was a bit more happening on screen…

5. ATARI ST
There's little to choose between the Atari and Amiga outings. The on-screen action appeared to be a little more frenetic on the Amiga, and the music seemed that little bit clearer, but otherwise the two appear virtually indistinguishable. It also has the same, easy-to-use controls, so track it down if you love your ST.

6. DOS
There's nothing wrong with the controls, and all the wacky humour has been retained, but the limited palette and simplistic sound has the DOS version of *Escape* trailing far behind its 16-bit peers. It also suffers from the bare bones level layouts of the 8-bit conversions. It tries hard, but this is very disappointing stuff.

Playing like a cross between *Gauntlet* and *Robotron*, you're constantly assaulted by an insane, unrelenting number of robots, all eager to stop your rescue mission before it's even begun. As with *Robotron: 2084*, you're constantly required to keep on the move, as standing in one place for too long will result in a deadly droid being launched that can quickly drain your energy bar with a number of well-placed shots.

Fortunately, mowing down hordes of droids usually results in them leaving a crystal behind, which in turn will slow charge your laser, then there's the fact that you have a number of bombs that will destroy anything that's unlucky enough to be standing next to you. Add in some simple puzzles like switches that need flicking, a specific number of humans that need rescuing on each stage – be careful, however, because they can easily be shot dead – and some great co-operative play and *Escape From The Planet Of The Robot Monsters* suddenly becomes a satisfying melting pot of videogame mechanics, lovingly wrapped up with a satirical bow.

Sadly, despite receiving some relatively good scores in certain magazines, *Escape* never really generated too much attention on home systems. This was possibly down to the fact that Domark had blessed the game with a highly awkward control system, which took an age to master, or that many versions simply lacked the insane number of sprites that appeared in the arcade original, and therefore lost much of the adrenaline rush that you received from playing the coin-op version.

Escape From The Planet Of The Robot Monsters certainly isn't going to appeal to everyone, but if you're prepared to give it a go, you'll discover a blaster that's as action-packed as it is humorous.

THINGS TO LOOK OUT FOR



SWITCHES
You're not going to be able to reach certain levels when escalators are out of order, so find these handy switches and turn that juice back on.



LOCKERS
If you're running low on bombs or health, simply hunt out these handy lockers. Blast them open and you'll be able to pilfer their juicy innards.



HUMANS
There are plenty of human slaves dotted around each stage, so try to collect as many as you can. Careful though, as accidental stray shots will send them to their maker.



PORT-O-MATIC
This bizarre looking device will suck you up and spit you out at the beginning of the next stage. You'll have to destroy a lot of robots to reach it though.

TRY THIS NEXT

It's a rather obvious one, but *Robotron: 2084* is one of the greatest blasters that's ever been made. Always challenging, and with the sort of visuals that only the wonderful early arcade games were fortunate to possess. It's a stunning game that will really test your reflexes and hand-eye co-ordination like no other shooter can. While many of you will no doubt want to go to MAME for the 'authentic' experience, there's also a surprisingly good adaptation on Xbox Live Arcade. Failing that, hunt down the original *Midway Classics* available on both PlayStation 2 and Xbox.





DEVELOPER LOOKBACK

WHILE EMBRACED BY GAMERS, THE MEDIA OF THE MID-NINETIES BEGAN TO TURN ON ELECTRONIC ARTS. BY THE DECADE'S END THIS GROUNDSWELL OF NEGATIVITY WAS CLOSE TO OVERSHADOWING ITS SUCCESS. BY 2004, THINGS WERE GOING TO GET WORSE, THANKS TO A PROGRAMMER'S WIFE. MIKE TOOLEY DELVES INTO EA'S MORE RECENT PAST TO FIND OUT MORE

Electronic Arts (PART 3 OF 3)

As the Nineties closed, so did the first epoch of gaming. The industry that had fed gamers for almost 20 years was dead. The arcades had gone; small operations weren't tangible any more and were subsequently bought up by bigger studios. Gaming was global, markets were massive, and in any industry where there is a mass market with high reward, getting it wrong, more often than not, is fatal. The videogame industry had developed into a very complex food chain. Releases were fragmented by format, with few games receiving multiformat releases. The new millennium was ushering in a new industry.

As every month passed, news would be reported of the latest acquisition or bankruptcy. 3DO, SNK and Acclaim would all be bankrupt within a few short years, Sega was failing on all fronts to be saved only by Sammy, Ubisoft was wobbling, DMA was rebranded as Rockstar and so it went on. Then there was the news that Microsoft was coming to the console market, which filled many with trepidation.

By escaping the commercial chaos, EA once again found itself portrayed badly in the gaming press. Its decision not to support the Dreamcast was seen as a major stumbling block for Sega and one that many of the Sega hardcore would attribute to the console's demise. It was argued at the time that if the Dreamcast had had *Madden* in the States and *FIFA* in Europe then its life



Above and below: And people say that the *FIFA* updates are hardly noticeable?





EA INSTANT EXPERT

Part of the EA rebrand is to allow the company to pursue adult content in games without tarnishing its family image.

Over the next five years expect to see EA develop its franchise beyond the beaten path. The *Command & Conquer* series received an FPS makeover.

Each *Medal Of Honor* game is uniquely rewritten for Germany. Rather than avoid the market altogether, EA removes any Nazi references and tones down the violence.

EA's most recent acquisitions will bring many single-format games to new formats. BioWare and Pandemic both have incredible IP, but more importantly EA has bought Super Computer International, affording the company the technology to develop its online Pong service into something along the lines of Steam.

The genesis for the EA rebrand came when John Riccitiello acknowledged, in an interview, the lack of innovation seen in the industry generally, saying: "We're boring people to death and making games that are harder and harder to play. For the most part, the industry has been 'rinse and repeat'. There's been lots of product that looked like last year's product, that looked a lot like the year before."

EA came in for a lot of criticism for misjudging the potential of the Wii. Once the decision was made to support the console, games were brought in, in under six months that put the competition in the shade.

Despite EA's refusal to keep game servers open once a title falls into disuse, this practice has allowed it to constantly change the online features when releasing updates of its games.

EA's new business model isn't new at all, while *Battlefront* will be freely available to download in the summer. In Korea, *FIFA* has been free for over a year, and is currently generating $1 billion per annum in online micro purchases.

EA has had some heavy conversations with Apple in 2007. Despite moving into mobile development, EA accused Apple of deliberately making it difficult to produce and distribute games for the iPhone. EA is looking for an upgrade and some iTunes support.

span would have been much longer. EA's lack of games support was mooted as one of the best reasons not to buy a particular console, according to many multiformat magazines, tantamount to the strength of the *FIFA* and *Madden* brands at that time. EA's decision not to support Sega wasn't as belligerent as it may seem, however. As a company, EA had contributed as much as Sega itself to the success of the Mega Drive, only to be disappointed that Sega wouldn't listen to the games publisher when it came to producing the Mega CD and Saturn. Sega had also maintained a hard line on its licensing structure, so a low sales base with difficult design tools made avoiding the console a no-brainer for EA as Keith Ramsdale, EA's vice president of the UK and Ireland explains: "That was a tough decision, but the team decided that our people and resources were better spent focusing on the PlayStation 2. As it turned out, we were right."

Electronic Arts believed the PS2 to be the machine of its generation, and, after arriving late for the PSone party, Larry Probst didn't want EA to play catch-up again. *SSX (Snowboard SuperX)* was released by EA on the newly formed BIG label, and its announcement left no doubt in anyone's mind where EA was going over the next few years. "*The Exciting World Of Boardercross*," the press release said. "Electronic Arts today unveiled its first entertainment title developed exclusively for the PlayStation 2 game console. *SSX/ Snowboard SuperX* – centred on the unique and exciting new sport of boardercross will be on display at the Sony Festival in Japan on February 18-20 as *SSX/Snowboard SuperCross*. Electronic Arts, the world's largest producer of interactive entertainment, is the only North American publisher to be invited by Sony to show software at the festival."

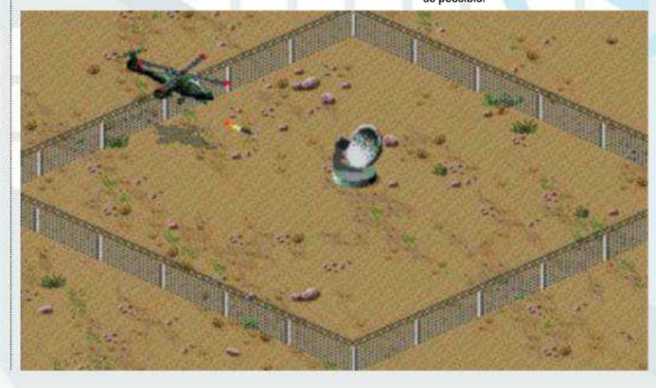
As the only US games producer there, EA had an attentive audience. Within weeks, *SSX* became the must-have launch game, on the most sought-after hardware the world had seen to that point. And while Acclaim, Ubisoft and Activision toiled on the N64 and Dreamcast for low returns, EA would always be a generation ahead on the new technology.

Probst also acquired the licence to the *Quake III* engine, as, at that time, PCs were still far superior to anything a console could offer. Probst hoped that by using the PC's best game engine, EA would remain in front of the competition on consoles, almost putting

> "AFTER ARRIVING LATE FOR THE PSONE PARTY, PROBST DIDN'T WANT EA TO PLAY CATCH-UP WITH THE PS2"

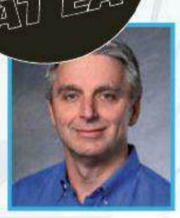
too much in for a machine to handle, then paring it down until the game worked. *James Bond In Agent Under Fire* was the first of these endeavours and, despite a lukewarm reception from the gaming press and forumites, who were still reeling from Rare losing the licence, the game spent months in the

We want *Desert Strike* back as soon as possible.



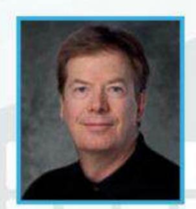
DEVELOPER LOOKBACK

THE PEOPLE AT EA



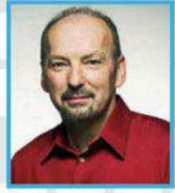
John Riccitiello
CHIEF EXECUTIVE OFFICER

John Riccitiello looks after all the EA brands. He has worked in a variety of consumer product companies including PepsiCo (group MD) and Haagen-Dazs International (MD). From October 1997 to April 2004, he was president and COO of Electronic Arts. He then left EA and co-founded Elevation Partners, where he served as MD and oversaw an investment of more than $300 million in the combination of independent videogame developers BioWare and Pandemic, before returning to EA in 2007.



Larry Probst
EXECUTIVE CHAIRMAN

Larry Probst has been there almost from the very beginning. Electronic Arts was generating $102 million in revenue when Trip Hawkins left. The board appointed Larry as its CEO and, over the next 16 years, he managed to increase the company's revenue by a massive 27,273 per cent to over $3 billion annually. Now acting as the company's executive chairman, Larry Probst is Electronic Arts' largest shareholder, owning 1.4 per cent of the company.



Peter Moore
PRESIDENT OF EA SPORTS

Once the face of Microsoft, Peter Moore was the president of the Xbox and Games For Windows and game development at Microsoft Game Studios. Peter joined Microsoft in January 2003. Prior to joining Microsoft, he was president and COO of Sega of America, where he was responsible for overseeing Sega's videogame business in the US. Before that, he was senior vice president of marketing at Reebok International Ltd. He certainly knows his stuff.



Frank Gibeau
PRESIDENT OF EA GAMES

Frank Gibeau was appointed president of the EA Games label in June 2007. In his role as label president, Frank is responsible for product development, worldwide product management, marketing, and planning for all packaged goods and online offerings within the Electronics Arts brand.



Nancy Smith
PRESIDENT, THE SIMS LABEL

Nancy Smith was named general manager of *The Sims* franchise in September 2005. Prior to that she also worked as executive vice president and general manager of US publishing, executive vice president of US sales, senior vice president of US sales and distribution and as vice president of sales.



Kathy Vrabeck
PRESIDENT, EA CASUAL ENTERTAINMENT

From August 1999 to April 2006, Kathy Vrabeck held various positions at Activision, including president of Activision publishing and executive vice president of global publishing and brand management. Following her departure from Activision, she served as a consultant with various companies, including EA.



V Paul Lee
PRESIDENT, WORLDWIDE STUDIOS

V Paul Lee has been with EA since 1991 and was named EA Worldwide Studios' president in September 2005. Previously he was executive vice president and COO of EA's Worldwide Studios. Before that he was senior vice president and COO. He also served as EA Canada's general manager.



The much-maligned *Agent Under Fire* was a surprisingly good game.



The *SSX* series has been a huge hit on the PlayStation 2.

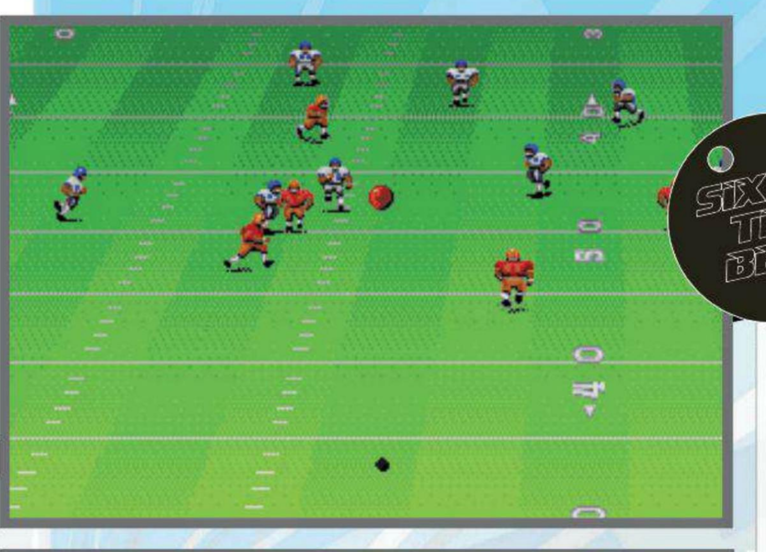
gaming charts. The *Quake III* engine would allow EA to bring the polish and sheen of its sports franchises to new genres and subsequent sequels.

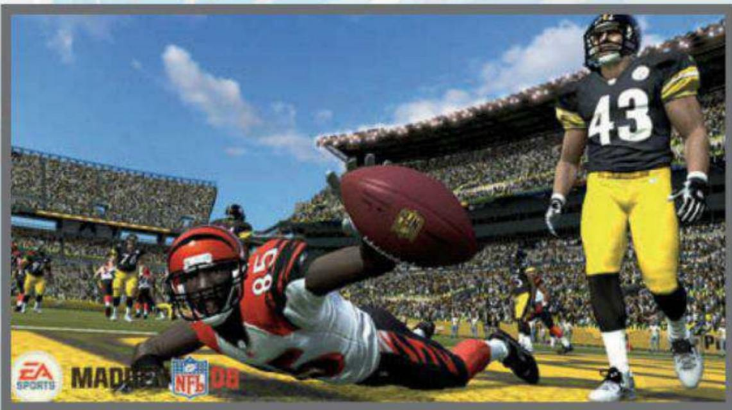
EA wasn't all about consoles, though, with its PC output through the early part of the millennium being phenomenal. Beside the newly updated *Sim City*, it started the decade on the PC with *The Sims*. First released in February 2000 it quickly became the biggest-selling PC game of all time, selling some 14 million units. At the time of writing *The Sims* has cleared over 74 million units. Dreamworks Studios was acquired by EA and it continued the *Medal Of Honor* series that had started life on the PSone and the PC, before subsequently converting the game back to home consoles. The *Medal Of Honor* games were the main beneficiary of the *Quake III* engine, with the PC versions being famed for their online gaming. EA was riding high while the industry was falling into disarray. New demographics were coming to gaming through *The Sims*, its sports games continued to do well, and games like *Medal Of Honor* and *Need For Speed* were becoming strong brands on their own.

EA also had the licence to *The Lord Of The Rings*, the biggest movie trilogy since *Star Wars*. The doomsayers weren't happy, though, and gaming magazines and forums poured scorn over what might be. Electronic Arts responded with what to date is still one of the best movie-tie-in games of all time. Rather than using a cumbersome 3D engine, EA used an engine that, at times, looked 3D, sometimes isometric but with gameplay that felt 2D. Somehow it had managed to capture the scale of the movies, peppered the game with a simple RPG mechanic and used the actor's likenesses and voices to create, in essence, a movie companion. All the elements and set pieces of the movies and Tolkien's world were here. Unusually, these games were disregarded for the PC, opting instead to return to the books to capture everything from the universe, including the bits that the movie had missed. Again, voiced by the actors and using their likenesses, this was adventuring done to the nth degree.

Coupled with the *Harry Potter* licences, EA had hit a stride so fast that it left all in its wake. The problem with always looking forward, though, is that sometimes you don't see exactly what is happening around you. The stats and the figures all point to this being a golden time for EA and the games certainly bore this out, but the wheels were loosening and cracks had really started to show.

In 2004, EA bought Criterion. Despite the success of *Burnout*, Criterion wasn't a cash-rich company by any stretch of the imagination, as most of its money went back into research and development for its popular middleware. EA bought the company for the middleware based on the success that it had licensing the *Quake III* engine. Criterion made more money from licensing its design tools at that time than from sales of its games; RenderWare technology was deemed the new industry-standard software tool, much as Deluxe Paint had been in the Eighties. EA wanted to have this in-house to simplify game development and put each of its studios on an equal footing. Additionally, the technology would be licensed out to EA's competitors. The biggest game developer in the world would now hold the keys to its competitor's ability to develop new games. The press didn't report this very favourably, worried that it would be bad for such a big publisher to be able to wield so much power over its peers. As EA scratched its skin while it rode the storm, worse was to follow when the now infamous EA spouse's





EA provides a great measure of gaming today and yesterday.

Six of the Best



Smarty Pants (Wii)

EA was slow to get product on the Wii, but the end results were only second best to Nintendo's. A quiz game that tailors questions to contestants' ages, meaning gamers from eight to eighty can join in. Every player's answers are tracked, and the game adjusts the difficulty to provide continuous stimulation and interactive challenges that are age-appropriate. Fun and silly. One day all family games will be like this.



The Lord Of The Rings: The Two Towers (Xbox, PS2, GameCube, GBA)

EA's first *Lord Of The Rings* game let players take control of the movie trilogy's heroes: Aragorn, Legolas and Gimli, with other members of the Fellowship taking an active role in the game, too. In *The Two Towers*, players battled various orcs and squared off against vicious boss monsters. Solid tactical gameplay elevated this to instant classic status on release.



Orcs & Elves (Mobile Phone, DS)

After the ill-fated dalliance with the N-Gage, EA teamed up with id to prove that mobile gaming can be worthwhile. *Orcs & Elves* put gamers into a world of swords and sorcery. Players can wield 11 weapons, as they confront over 35 enemies. With over five hours of gameplay on offer – double that for the DS version – this really was a benchmark for mobiles.

Skate (360, PS3, PC)

Individual style combined with physics-driven animations promised that no two tricks are the same. There's lots of room to pull tricks, explore and find the best spots. You can even capture footage to create and show off your style with friends across the world. Skateboarding without having to get down with the youth. Great. It's worried Activision a bit, too.



Harry Potter And The Order Of The Phoenix (360, PS2, Wii, DS)

Despite being available on everything, the Wii shines in this movie tie-in because of the wand controller. Using an actual wand to control a wand is a gaming first and one that wasn't lost on anyone that played this. Playing like a series of mini-games held together by the story, this turned out to be a surprising movie tie-in.



UEFA Champions League (360, PS2)

Using the most recent *FIFA* engine, EA greatly improved the game by adding a brilliant card-trading game to the mix. Trade, buy and swap cards in game or online, then play the cards you've earned during each game. It worked fantastically well, and it was disappointing to see EA lose the licence to Konami's *Pro Evolution Soccer* series in 2008.

blog appeared on the internet. Now EA was being lambasted in the world's press, as well as specialist magazines.

The exasperated wife of an EA employee wrote the blog, unhappy with her husband's treatment by the company and the effect it was having on their family. It opened like so: "EA's bright and shiny new corporate trademark is 'Challenge Everything.' Where this applies is not clear. Churning out one licensed football game after another doesn't sound like challenging anything to me; it sounds like a money farm. To any EA exec that happens to read this, I have a good challenge for you: how about safe and sane labour practices for the people on whose backs you walk for your millions?"

"I am retaining some anonymity here because I have no illusions about what the consequences would be for my family if I were explicit," it continues. "However, I feel no impetus to shy away from sharing our story, because I know that it is too common to stick out among those of the thousands of engineers, artists, and designers that EA employs. Now, it seems, is the 'real' crunch, the one that the producers of this title so wisely prepared their team for by running them into the ground ahead of time. The current mandatory hours are 9am to 10pm – seven days a week – with the occasional Saturday evening off for good behaviour (at 6.30pm). This averages out to an 85-hour workweek. Complaints that these once more extended hours, combined with the team's existing fatigue would result in a greater number of mistakes and an even greater amount of wasted energy were ignored. To put some of this in perspective, I myself consider some figures. If EA truly believes that it needs to push its employees this hard – I believe that they don't, and that it is a skewed operations perspective alone that results in the severity of their crunching, coupled with a certain expected amount of the inefficiency involved in running an enterprise as large as theirs – the solution, therefore, should be to hire more engineers, or artists, or designers, as the case may be. Never should it be an option to punish one's workforce with 90-hour weeks; in any other industry the company in question would find itself sued and out of business so fast its stock wouldn't even have time to tank. In its first weekend, *Madden 2005* grossed $65 million. EA's annual revenue is approximately $2.5 billion. This company is not strapped for cash; their labour practices are inexcusable."

The whole article not only went on for over 5,000 words, but it was also the beginning of a complete revolt. Within days, Joe Straitiff, who had just been let go from EA after an illustrious, if short, career at Maxis, posted a similar piece from a husband working at EA's perspective, citing the same issues from the 'victim's perspective'.

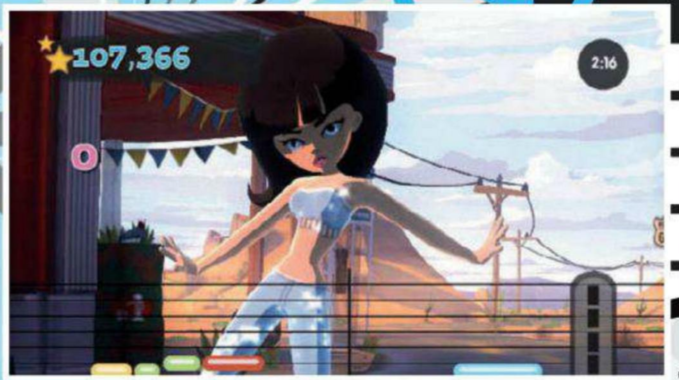


Medal of Honor hits Nintendo's Wii.

"THE NOW INFAMOUS EA SPOUSES' BLOG LED TO EA BEING LAMBASTED IN THE WORLD'S PRESS, AS WELL AS IN SPECIALIST MAGAZINES"



Above: *Sim City*, another of EA's finest games. **Inset:** It doesn't look like it should be the biggest-selling PC game of all time, but it is.



Boogie is typical of the approach EA is now taking with new IP releases.

"Well, a few weeks pass, and some bug shows up in my code at 10pm (I'd left at seven or eight, as I was trying to only work about 40-50 hour weeks and was keeping up with my schedule by working at breakneck speed – but there was no way I was working on weekends, which you were required to do if you were 'behind')," explains Straitiff. "I got a call from another team member asking if I knew what a certain problem was. It clicked, and I gave him a solution that worked, over the phone, in under 15 minutes. Well, the next day I was pulled into another meeting with my supervisor and got yelled at for not being there. He said (even though he denied it in a later meeting) that he didn't have an issue with the quantity or quality of my work (in fact he praised the quality of my work), but said that someone in my 'senior' position (my title was only software engineer not senior engineer, but I've shipped a lot of titles and been in the industry for about six years) should be available a lot more at 'this time in the project'. In fact, I should be working at least 12 hours a day, which I said was unacceptable. I'd do the work given to me, but I certainly wasn't going to sacrifice my family, and certainly not that early in the project. It's okay (not really, but it's a common consensus) to work those kinds of hours the week before a major deadline (E3, alpha, beta, final), but, outside of that ten hours a day should be the absolute max."

These two initial blogs started a revolution inside EA and would eventually result in a class action being brought against the company, where considerable damages were paid. This case was made more ironic because of the early EA mantra to make stars of its programming teams and the tabloid press across America were quick to jump on this. Keith Ramsdale explains how this has affected EA then and now: "It affected us profoundly – and set off several changes in the way we think and work," he says. "EA is the industry leader and gets a lot of the blame for what we know are really industry-wide problems. Most big studio organisations were using the same practices, but EA stopped and said, 'We are wrong and we can do better.' We settled the class action lawsuits with California engineers and artists and changed how we scheduled certain groups of employees, making them eligible for overtime. More broadly, we've set up systems and encouraged managers to be more responsive to employee concerns. Like all studios, we're always going to have 'crunch time' – but there's a lot we can do to support and reward the people who now have to go through it."

One of the main problems EA faced at the time came from the fact it made many acquisitions of smaller studios. Gamers, too, were unhappy about this. EA effectively mothballed Origin Systems after *Ultima Online*, and kept the company in stasis before winding it up three years later. This would become another key learning point that would shape EA as we know it today.

"Looking back, there was plenty of blame to spread around for mismanaging those operations (Bullfrog, Origin, Westwood)," Keith says. "The studios weren't performing, and EA didn't have a well-tuned strategy for assimilating new talent. In recent years we've got much better at acquiring and developing new studios – Maxis, Black Box, Criterion and Mythic are more recent examples of independent studios that have flourished under EA



EA arrived at the new millennium with a fun-filled game.

EA TIMELINE 2000-2008

2000 IN A MOVE THAT WOULD ENSURE THE QUALITY OF FUTURE RELEASES, EA LICENCES THE QUAKE ENGINE. IT ALSO RELEASES THE WORLD'S BIGGEST-SELLING PC GAME, THE SIMS

2001 EA ANNOUNCES THAT TODD MCFARLANE WAS TO CONTRIBUTE ADDITIONAL CONTENT TO ORIGIN SYSTEMS' ULTIMA ONLINE, CREATING A COMPLETELY NEW GAME. THIS GAME WAS ALMOST COMPLETE WHEN THE STUDIO WAS CLOSED

2002 EA STEALS CHRISTMAS IN 2003, DOMINATING THE CHARTS WITH ITS SPORTS TITLES. FIFA 2003 SELLS 2.5 MILLION UNITS IN FOUR MONTHS

2003 EA HITS A RECORD SALES MILESTONE IN 2003 WITH 22 PLATINUM GAMES IN SIX MONTHS.

2004 A DISGRUNTLED EMPLOYEE'S WIFE SHAKES EA TO THE CORE. HER BLOG BECOMES THE MOST READ BLOG ON THE INTERNET FOR OVER TWO WEEKS

2005 EA HELD ITS FIRST ANIMATION COMPETITION FOR GRAPHIC ARTISTS IN CANADA. THE RESPONSE WAS SO OVERWHELMING THAT THE $40,000 FIRST PRIZE WAS SPLIT INTO TWO $20,000 PRIZES BECAUSE THE EXECS COULDN'T CHOOSE AN OUTRIGHT WINNER

2006 EA REVEALS AT E3 ITS INTENTION TO MOVE SERIOUSLY INTO THE MOBILE MARKET AND ANNOUNCES A ROSTER OF WIRELESS GAMES TO BE PLAYED OVER MOBILE PHONES

2007 EA HAS A FOUR-PRONGED REBRAND, DIVIDING THE COMPANY INTO FOUR SEPARATE LABELS WITH A COHESIVE STRATEGY

2008 EA ANNOUNCES A NEW BATTLEFIELD GAME THAT WILL BE FREE TO GAMERS. THE NEW BUSINESS MODEL IS EXPECTED TO RECEIVE REVENUE FROM ADVERTISERS AND THROUGH MICRO TRANSACTIONS

Six to Re-make



Desert Strike

Desert Strike was absolutely unmissable in the early Nineties, featuring a true to life back story, amazing weaponry and explosive gameplay, sprinkled with a strategic approach to warfare. The challenge on offer was no slouch either, and the game was more than compelling. A game that's crying out for a current-generation remake.



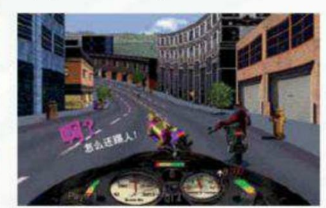
Immercenary

When EA fused art and VR in *Immercenary*, little did it know that it would create one of the first sandbox games. But the FMVs and VR time travel left many reviewers cold. However, for those who have played it, the experience has seldom been bettered. What EA would be able to deliver on new technology is anyone's guess.



Wing Commander

The greatest space opera to reach gaming. Too much for the technology at times, this series went from strength to strength, started well and finished on a high. Sure, each game had flaws, but the magnitude of the game doesn't exist in gaming now. Please, EA, put us back into space in high-powered ships and online battles.



Road Rash

Armed-to-the-teeth motorbike racing, this was one of EA's strongest early titles. The ability to harm your opponent made it very popular. Really, it was an early *Burnout* that EA got complacent with. The time for its return is now, as the hardware and the engine is there (*Burnout Paradise*) and the online service is stable. It would be amazing.



Mail Order Monsters

The game that *Pokémon* aspired to be. Build a monster and battle with your mates' monsters. In the Eighties it was great; today it'd be awesome. There hasn't been a good monster game since *Rampage*. Taking the monsters online would be the icing on the cake. An RPG trading game that would let you create and take life on a whim.



MULE

For obvious reasons this game would be awesome brought bang up to date. Sensible Software had enormous success with its 'tribute' to *MULE*, the 16-bit classic *Mega-Lo-Mania*. That was 15 years ago now, though, and a brand new version of the game, properly updated, would be great. Strategy games have seldom been as rewarding.

"THESE BLOGS STARTED A REVOLUTION INSIDE EA. IT LEARNT ITS LESSONS FAST AND A MORE CONGENIAL CULTURE NOW PERMEATES"

management. We make long-term investments in people and franchises and encourage each operation to develop its own identity."

EA learnt its lessons fast and a more congenial culture now permeates. "EA is filled with extraordinarily passionate people," he says. "We challenge ourselves, and our teams, to assume industry leadership. Like every studio in the industry, we assume each game will hit an inevitable 'crunch time', but we try to manage the project to minimise the stress on the team. Our experience is that 'crunch' is remembered as the worst and the best time of any project. You work late, but the result and the camaraderie that comes with it is extremely rewarding."

EA also had the honour of playing hardball with Microsoft and winning. Initially, EA declined to support Xbox Live, and it was only after Microsoft revised the service that it agreed to publish for the Xbox. "We felt there were some fundamental issues that needed to be resolved around how developers/publishers were compensated for content," reveals Ramsdale. "The whole concept of Live was new and no one had really thought that through. Since then, the hardware manufacturers – including Microsoft – have been very responsive to our concerns." It's worth noting that Microsoft feared a Dreamcast scenario without the EA franchises, and pulled its own sports titles as soon as EA finally arrived on the scene.

So, what of the future for EA? Keith tells us that the rebrand is done. "The four labels are: EA Sports, EA Games, The Sims, and EA Casual Entertainment. Organising into four labels allows us a much tighter focus on each genre and opportunity. Our recent agreement with Hasbro is a good example. Under the old structure, that project wouldn't get much attention, but as part of the Casual label, it's a top priority and it's going to deliver a lot of great entertainment. It's a creative and an economic priority for the label and they're going to make sure it works."

It would appear that after 25 years Electronic Arts has come full circle, with Ramsdale admitting that it will once again concentrate on new intellectual property. "We have set a major goal of introducing innovative new titles that come from our own studios – we've introduced *Black*, *Skate*, *MySims*, *Boogie*, *Smarty Pants*, *Playground* and many others. […] The decision to ramp up our development of new IP came from the recognition that we've got the most talented studio network in the world, with many of the industry's most creative people. They've got a ton of great ideas – games with extraordinary potential. So both as a creative exercise and a business proposition, we've decided to invest in the people who work at EA, to let them create and explore. There's a process for this and it's already delivering some great new IP. We're proud of the new IP coming from our studios, but we're just as proud of epic franchises like *Madden*, *FIFA*, *NBA Live*, *Need For Speed* and others that, year after year, give millions of fans exactly what they want from a game."

Ramsdale is unstoppable when talking about the EA of today and tomorrow, and his enthusiasm is really hard to escape. Like a continuous loop, he finishes off where EA first began, all those years ago. "Our new CEO John Riccitiello is changing not only the shape of the company, but the culture – we're less arrogant, more innovative and more willing to take creative risks. Within the company there's still a lot of pride. If you look across the number of creative investments EA is making, the number of new games, the platforms we're making them for and the vast number of countries where EA games are being bought, loved and played, you'll see that no one else is doing that. That's a good feeling." Isn't it just, and something we've all hoped to hear.



Tiberium, an FPS based on *Tiberium Wars*, was eventually cancelled.



SPECIAL THANKS TO Keith Ramsdale EA VP UK and Ireland and the always helpful Jodie Van Hibb.

THE CLASSIC GAME

MICRO MACHINES

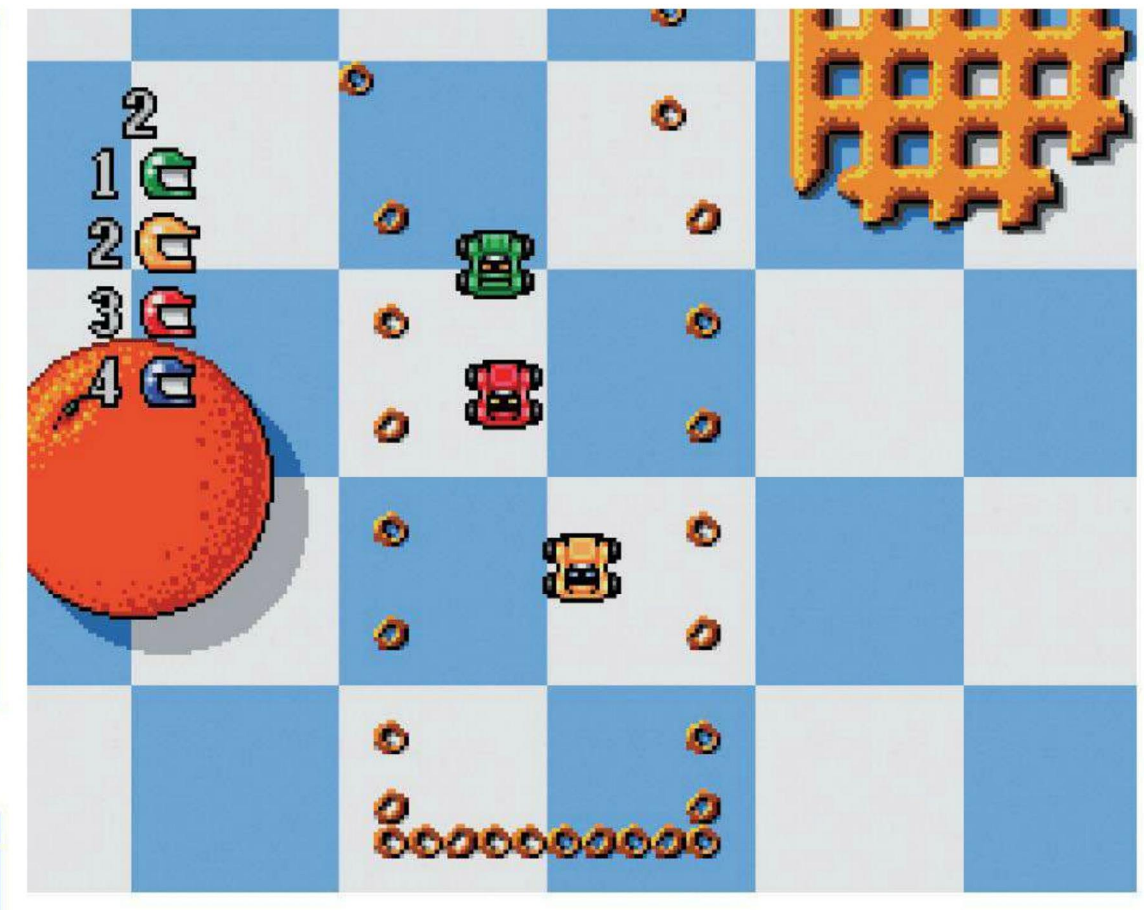
Like Marble Madness, Micro Machines was a title that dragged a playground-pastime from out of the school gates and onto a television set. Stuart Hunt looks back at a Codemasters classic that proved to be a one of the most enjoyable multiplayer experiences ever released on Sega's mega-brick

IN THE KNOW



- » **PUBLISHER:** CODEMASTERS
- » **DEVELOPER:** CODEMASTERS
- » **RELEASED:** 1993
- » **GENRE:** RACING
- » **EXPECT TO PAY:** A FEW QUID







» Poor Mike, not only has he finished last, he seems to have a spot of water in the old ears, too.



» One of the more enjoyable sections of this extremely jittery racetrack.

Micro Machines feels so quintessentially Codemasters that you half expect one of the Darling brothers to feature in its colourful roster of cartoon characters. Codemasters proved that the archaic top-down racer still had plenty of gas left in its tank. Carrying a super-charged, 16-bit engine, *Micro Machines* jump-started a rapidly disappearing genre that the master of codes had popularised five years earlier.

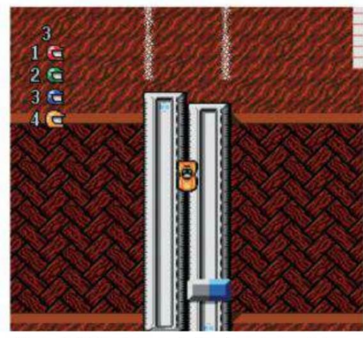
Micro Machines' lineage can be traced way back to the release of Codies' first game: *BMX Simulator*. The popular cycler's bird's-eye perspective, colourful dirt tracks, and simple controls could have easily played the precursor to the *Micro Machines*' eventual videogame spin-off. You could bet your last credit that while Codemasters was brainstorming ideas about where to steer the franchise, the words '*BMX Simulator*' were left ringing in the air once or twice. In retrospect, playing both games now, their similarities shine louder than a Scorpion/Sub Zero fight on a black-and-white telly.

What is essentially a dusted off version of the earlier NES release, the Mega Drive redux of *Micro Machines* made use of its new pimped-out ride, but without being over-showy or graphic-schmoosing. Its premise was delightfully simple, as were its looks, controls and gameplay. While most racing games of the time opted – as well as could be expected – for realism and speed, *Micro Machines* chose to drive skittishly down the wrong lane of a dual carriageway while carefully dodging gargantuan road-kill.

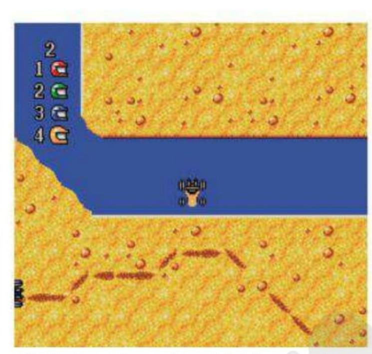
Codemasters cleverly polarised the game around the point that the cars were 'micro', and as such, the world, as seen through their windscreens, was not. This made for an interesting concept to base a racing game around, and its wonderfully oversized tracks soon won the hearts and pocket money of gamers across the country. Codemasters clung tightly to the key appeal of *Micro Machines* (which, wasn't the fact that you could pretend you were a car-rich giant).

For the friend-deficient gamer, two very different single-player game modes were

"MUCH OF THE GAME'S CHARACTER AND CHARM COMES CHUGGING OUT FROM THE EXHAUST PIPES OF THE FOUR-WHEELED, MULTI-HUED MITES"


» The perfect bridge for measuring how far you've travelled. Just watch out for that damned eraser.


» Those globs of glue are incredibly annoying, as the red car is about to discover.


» The dune buggy takes a well-earned dip in the water – shame he's still in the middle of a race.

introduced. The first was the Challenge mode, which would see you race-off against three other computer-controlled opponents of your choosing. The driver with the lowest ranking after three races would be ousted from the competition, leaving you to select one of the remaining characters to take their place. This systematic method of picking-off players meant that a cunning micro-machinist would often leave a few of the less-inept drivers waiting at the starting grid for the later races.

The second option was the Head-To-Head mode, in which two racers would frantically try to outrun each other off the edge of the screen. The camera, playing referee, would dish out points to the player who reached the edge of the screen first, and the racer to amass the most points before the race was over would be declared the winner. The head-to-head option came into its own in two-player sessions, and remains one of the most enjoyable pastimes two consenting adults and a Mega Drive can participate in.

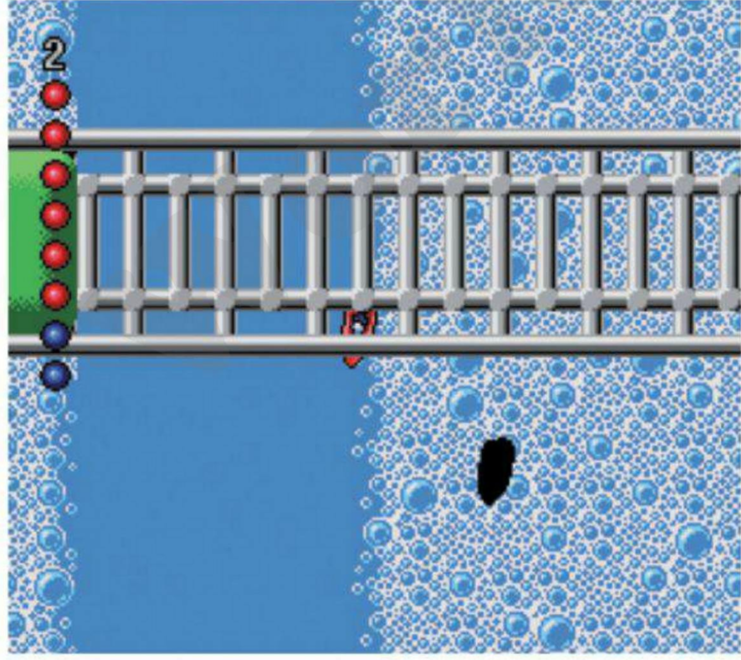
An identity parade made up of 11 wonderfully quirky characters welcome you into the game. Its roster included the slick, shade-wearing Spider, the glamorous Cherry, and pie-predator Walter. The cool, the forgettable and the avoid-like-the-plague were all present and accounted for. And if looks weren't enough to deter you from picking which rotund or geeky character to control in the game, helpful clues about their driving prowess, such as 'able', 'rash', or, in the case of poor old Walter, 'dire', labelled their chirpy profiles.

While the collaboration of oddballs injected a human element into proceedings, it's obvious that the cars were cast as the true stars of the show. Much of the game's character and charm comes chugging out from the exhaust pipes of the four-wheeled, multi-hued mites. Each one would display its own personalities, idiosyncrasies and relationships with inertia. The sports cars, while extremely quick, were skittish pocket-rockets of concentrated gusto that proved extremely difficult to tame. The muscular 'Warrior' cars, however, were easy to pull around hairpin bends and made easy work of slippery oil droplets.

To couple their individual characteristics, each vehicle was given its own unique racetrack. The four-by-fours contest around a messy breakfast table, with sticky orange juice splodges and cereal-markers shepherding racers around its cluttered racetrack. The aforementioned roadsters shoot around an untidy school desk, complete with bridges made from rulers, and ramps made out of school books from which to perform textbook jumps. While the wonderfully imaginative racetracks were ferociously unforgiving, they proved a true testament to the creative flair of the Warwickshire-based developer.

Codemasters infused a dodgem element into the racing, which would prove an essential factor in generating the appeal of its 'multiplay-hem' action. Drivers could be rammed into oversized oranges, enormous nuts, and even off of the track itself as bullied drivers landed in a puff of smoke and a cacophony of laughter by a smug mate.

Codemasters also touched on the collecting aspect of the *Micro Machines*, with each win earning you a new car for your wooden spice-rack. Although not boasting a comprehensive list of rotating, tuning, decorating, and upgrading, it was nevertheless a unique way of gauging your progress through the game. It also offered a tidy way to proudly exhibit your collection of speedy-sprites to your friends… well, up until you flicked the off switch on your Mega Drive and scurried out of the door to play some footy. But then, there was always the allure of *FIFA* and a multitap.


» The red boat is well in the lead, but what's that ominous black shape underneath the water? Could it be… surely not… a stealth boat?

DEVELOPER HIGHLIGHTS

BMX SIMULATOR
SYSTEMS: CPC, ZX SPECTRUM, C64, MSX, AMIGA, ATARI ST
YEAR: 1986

ROCK STAR ATE MY HAMSTER
SYSTEMS: CPC, ZX SPECTRUM, C64, AMIGA, ATARI ST
YEAR: 1988

TREASURE ISLAND DIZZY
SYSTEMS: CPC, ZX SPECTRUM, C64, NES, AMIGA, ATARI ST
YEAR: 1987





TOY GLORY

Micro Machines proved so successful on the Mega Drive that Codemasters quickly got to work on releasing two sequels: *Micro Machines 2: Turbo Tournament* and the updated *Turbo Tournament '96*, which was released just a year later. Reacting to the feedback that it had garnered after the release of the first game, Codemasters realised straight away that the franchise had proved a popular multiplayer melee with gamers. It capitalised on this fact by designing a special Mega Drive cart specifically for the game's follow-up. Known as the J-Cart, this chunky beast housed two additional controller ports and made it possible for four players to race simultaneously. While playing with four mates had the tendency to make your Mega Drive look like it had been rigged up to a life-support machine, it did allow friend-affluent gamers out there the chance to race without having to wait for those annoying turns.



The Definitive

SPACE INVADERS

PART II

THE STORY SO FAR: FOR 13 YEARS, HUMANKIND HAS FOUGHT THE ATTACKS OF THE SPACE INVADERS, AS CHRONICLED ON PAGE 84 OF THIS VERY BOOKAZINE. IT SEEMED THEY'D FINALLY BEEN DEFEATED IN THE EPIC 43-STAGE STRUGGLE OF SUPER SPACE INVADERS '91. BUT WAIT – WHAT'S THAT ON THE RADAR?



1991
SUPER SPACE INVADERS (AMIGA/SPECTRUM/MASTER SYSTEM)

For the sake of continuity, we're going to take a look at the non-arcade versions of *Super Space Invaders '91*, because they're significantly different from the coin-op. Despite actually coming out in 1991, Domark's home ports dropped the '91' suffix from the name (except the Amstrad CPC, which still has it on the title screen). Second, they have different stories – the SMS version had a new plot, setting the game in 2073 rather than the 2091 of the Amiga version and giving your ships different names, while the Amiga version has a long, tongue-in-cheek new intro sequence and funny cut-scenes. And third, the Amiga and SMS versions include both the Majestic Twelve and SSI91 structures of the game (here titled Normal and Advanced respectively), giving you the choice of taking branching routes to the end or playing every stage one after the other. (The Spectrum forces you through all the levels in sequence.)

More importantly, however, the gameplay itself has been mangled almost beyond recognition. The Amiga version burdens you with a painfully underpowered, slow-firing ship, rendering proceedings more akin to original *Space Invaders* in pace than the sequel and making some stages (the third, for example) impossible to complete without losing lives unless you get lucky with power-ups. The Spectrum and Master System games fare even worse in some respects – their first wave of invaders, for example, comprises just eight columns rather than the 11 of the coin-op and Amiga games, but to compensate for their reduced numbers you only get three defence bunkers and the invader fleet has to drop just four levels to invade you, rather than the ten of the arcade game. (The Amiga splits the difference with seven, but in another interesting quirk it accommodates the three extra ranks of invaders by dispensing with the gaps between the columns that have been a core element of every *SI* game ever.) They're broadly more authentic re-creations of the original, though, despite the Speccy version being gruesomely slow and lacking all the bosses and the Cattle Mutilation rounds.

Where things get really weird is at the end. None of the home ports can cope with the arcade's final boss stage, so on Amiga and SMS you get a whole new boss with telescopic arms and a variety of attacks. Defeat it on the SMS and the game's over, but on the Amiga you then get a whole extra three-wave bonus stage clearly based on Capcom's influential shooter *Commando*. Heck knows why – the coin-ops were by different companies, the Amiga versions were released by different publishers, and as far as I can ascertain none of the coding teams worked on both games – but it's there, and you'll just have to deal with it.

» It even looks worse than the Amiga's *Commando*.





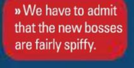
1991
SUPER SPACE INVADERS (C64)

And another separate entry's needed here, because while the Amiga/Speccy/Master System versions of *SSI* have various and quite substantial differences, both from the coin-ops and each other, they're nevertheless still clearly identifiable as ports of arcade *Super Space Invaders*. The C64 version, though, is a different kettle of weird-looking fish altogether. When you first load it up, it appears to be a superb conversion, far better than even the Amiga game. The attract sequence and the screen aspect ratio and layout are copied directly from the coin-op, and it's much faster than any of the other ports. (It's also the Majestic Twelve incarnation, with branching stages.)

For the first three waves it seems to be great, until you discover that those three waves represent practically the entire game that was coded. Every subsequent level just repeats three rounds of standard invaders (with occasional appearances from the Expanders of the arcade's third stage) on different backdrops, with none of the circling, diving, shifting, weaving attack rounds of arcade *SSI* – it's basically just an original *Space Invaders* that's broken into the sequel's house and nicked all the clothes out of its wardrobe. Most of the special weapons are missing, too, with only the Destroy Beam surviving, and for some reason the Mystery Ship is always depicted as the Egyptian pyramid from the coin-op's penultimate rounds. There's one further element of original content, in the shape of an all-new roster of bosses, but otherwise this is a fairly scandalous cut-and-shut job – an entirely decent *Invaders* clone in its own right, but as a conversion of *SSI91* it's shameful.



» We have to admit that the new bosses are fairly spiffy.



The Definitive SPACE INVADERS

» The hardware's palette couldn't manage to graduate the colour smoothly from top to bottom, so Taito settled for this rather rubbish banding-and-stippling effect. Note also that the bunkers and Laser Base are white, not cellophaned green as they actually were in almost all stand-up cabinets.



1994
SPACE INVADERS DX (ARCADE)

"*Space Invaders* had a great vogue in 1978," announces the intro sequence, and 16 years later Taito decided to celebrate the game's transition into adulthood by somewhat inexplicably bringing the original version back to the arcades in almost unchanged form. *Space Invaders DX* is a pseudo-retro compilation, offering a choice between the three classic Japanese colour-schemes: black-and-white, colour, and a very crude simulation of the cellophane-strips version in which the strips are clearly visible on screen (which of course they never were in the coin-op, because players only saw the images after they'd been reflected through the strips and were never actually looking at the bits of cellophane). In a misguided attempt at humour, the strips don't quite fit flush with each other, leaving a gap where invaders and bunkers stick out from below the fake strips and have one line of white pixels.

On the upside (sort of) you also get a simulation of "reflector" mode - with a rather lo-res rendition of the original backdrop painting hard-wired into the game for the first time – and a two-player head-to-head game (more on that later), but the closest thing to a real draw in *Space Invaders DX* is the Parody mode. This mode played a normal game of *Space Invaders* but with the graphics replaced by characters and backdrops from nine other Taito games. Titles featured include *Bubble Bobble*, *Rainbow Islands*, *Arkanoid*, *Darius* and *New Zealand Story*, and the new graphics give the creaky old game a new lease of life with the urge to see what each successive level will bring.



1994
SPACE INVADERS DX F3 (ARCADE)

Shortly after the original arcade release of *DX*, Japanese gamers were treated to a new version of the same game, which ran on Taito's more powerful new F3 hardware (the previous one having used the company's ageing "B System" standard). The only differences noticeable to players were the remixed intro/menu music and the much brighter backdrops in Parody mode, and we're only mentioning it here because DX has so many modes we need an excuse to get another screenshot in.



» Parody mode actually looks worse in the F3 version, because the characters don't stand out very well against the brighter background pics.

1994
SPACE INVADERS – THE ORIGINAL GAME AKA SPACE INVADERS '94 (SNES/GAME BOY)

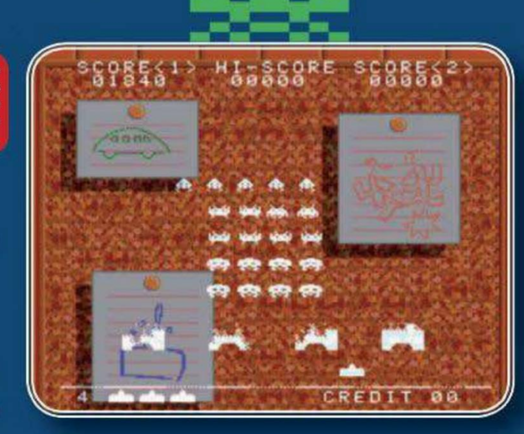
Space Invaders DX would form the basis for *Space Invaders* releases all the way up to 2004's *Space Invaders Anniversary*, though each subsequent release included some kind of new addition of its own to the core modes. The exception was the SNES port, which is probably the only home release of a *Space Invaders* game ever to not have some kind of unique feature, unless you count the fact that it was also hidden inside a Game Boy game. If you booted the GB version up on a normal GB, you got a version that was much the same as the terrible 1990 GB port, except with much more authentic sound and slightly improved graphics. Fire it up on the Super Game Boy peripheral for the SNES, however, and things got a lot more interesting.

First you had the choice to play in Super Game Boy mode, which featured the GB game in the three classic colour schemes of the original (missing only the "reflector" mode), set inside a cute screen-surround simulating the original stand-up cabinet. However, if you selected Arcade mode, then you were somewhat startled to see the full-blown SNES release spring to life from the tiny GB cart - it's basically *Space Invaders DX minus the* Parody mode, with the four graphics options and the same versus game as the coin-op.

» The Super Game Boy surround art introduces a bit of a continuity paradox, since in reality there was never a stand-up version without the reflector backdrop.



» We imagine those are Tomohiro Nishikado's original doodles for the game graphics in the background.



1995/1996
SPACE INVADERS – THE ORIGINAL GAME (PC-ENGINE CD/SATURN)

There were two other releases of the collection based on *Space Invaders DX*, each with their own unique features. The Saturn game had a radically different new versus game in place of the arcade/SNES one, which added thumping techno music, selectable backdrops and modern cutesy-style graphics for the invaders, and the versus mode in the PCE CD version was yet another all-new incarnation with different rules, J-pop music and cartoon-girl backdrops (in addition to a more sober traditional implementation), though in common with the other-format versions there was no option for a CPU opponent.

But the more interesting exclusive feature of the PCE game was an extra version of original *Space Invaders*, set against a series of background pictures ranging from cork noticeboards to more cartoon girls to crayon sketches done in a similar style to *Yoshi's Island* on the SNES. (Going some way to making up for the PCE CD's implementation of the "reflector" mode, which was dog-rough.) Oddly, the Saturn release went on to be reissued in 1997 in a single-CD double pack edition alongside *Puzzle Bobble 2X*.

1995
AKKANVADER AKA SPACE INVADERS '95: ATTACK OF THE LUNAR LOONIES (ARCADE)

Conceptually, the next proper *Space Invaders* game was a hybrid of *SSI91* and *Space Invaders DX*'s Parody mode. Like *SSI91* it has power-ups and a defined end, but this is a very tongue-in-cheek game where the five characters you can play as include Harry, a cute little cartoon puppy shooting bones at the invaders from his basket, and Ben-Ben, who is – not to put too fine a point on it – a bright blue turd flying on a urinal and shooting blasts of toilet bleach at the alien hordes. Visually, sonically and in gameplay terms it's very much in the style of Namco's 1991 *Galaga* spin-off *Cosmo Gang The Video*.

Despite the title, almost none of the 32 stages take place either in space or on the moon, preferring instead settings like haunted houses, food factories and tropical beaches. In addition to power-ups dropped from the Mystery Ship, your characters all have various secondary attacks and there are odd quirks like your own defence bunkers shooting at you in some of the haunted house levels, which helps keep the player on their toes. As with *SSI91*, being invaded doesn't immediately end the game, which helps keep this fast-paced and entertaining but fiercely hard *Space Invaders* just the right side of completely overwhelming.



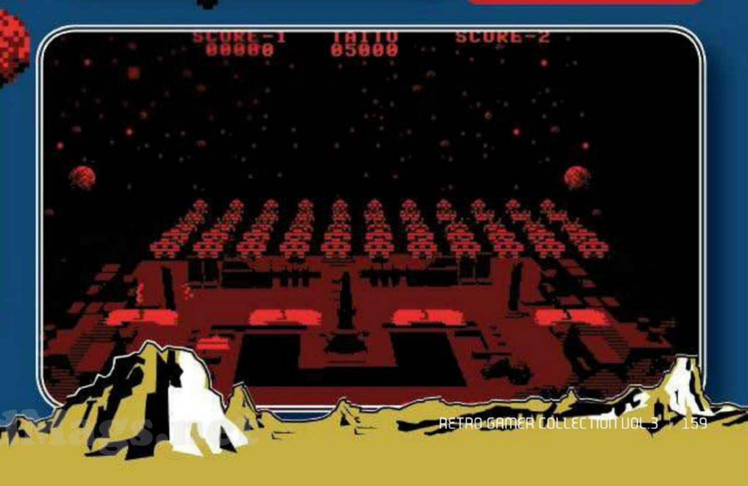
» Again, the first level pays homage to Nishikado's original 'octopus-like' concept for the appearance of the invaders.



1995
SPACE INVADERS VIRTUAL COLLECTION (VIRTUAL BOY)

Nintendo's virtual-reality console is one of videogaming's most infamous flops, and one of its odder little twists is that it got a release of one of the world's most ubiquitous videogames, but in such small quantities that it's now one of the rarest commercially released games in existence. *Space Invaders Virtual Collection* features six modes – you get normal 2D renditions of *Space Invaders* and *Space Invaders Part 2*, versions of each of them in a tilted-forwards 3D perspective that would shortly be seen in many home-console formats, plus time-attack and score-attack games. The 3D effect works really well, giving a convincing impression of floating above the lunar backdrop as you fight off the encroaching alien armies, and while it's the same old game at heart it's a real pity that rarity-hoarding tossers prevent more people from enjoying this unique *Invaders* experience.

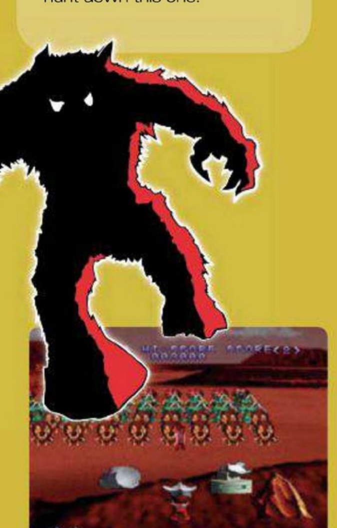
» Personally, we would gladly see all rarity-hoarders crushed, encased in cement and buried 50 feet under the New Mexico desert in the legendary landfill of Atari *ET* cartridges. Preferably while still alive, the greedy, sweating, beady-eyed idiots.





1995 PD ULTRAMAN INVADERS (PLAYSTATION)

There's so much fantastic stuff crammed into *PD Ultraman Invaders* that it felt wrong to leave it as nothing more than a footnote in *Space Invaders'* lengthy history. Therefore, for your viewing pleasure we've put together an indispensable step-by-step guide to this fantastic PSone release – just don't expect us to track a copy down for you. It took long enough to hunt down this one.





The disc contains both a port of *Space Invaders – The Original Game* and the main *Ultraman* game, which has three main modes (all three of which, share the otherwise-unique quirk of the Amiga version of *SSI91*, in that there are no gaps between the columns of invaders). The main one-player mode is a fairly easy *Invaders* with two switchable viewing modes – standard 2D, and a tilted-forwards 3D scrolling mode superimposed over a slightly tacky 2D backdrop stretched out in the style of the SNES's Mode 7 into unconvincing fake 3D. (Annoyingly, even if you play in 2D mode, the game switches back to 3D to show the last invader being shot, you then have to manually reset the view for the next wave.) You play as various versions of Ultraman as the game progresses through its 19 waves, and all sorts of weird things occur as you play.



There are three Mystery Ships – a normal one, an *Ultraman* one that drops power-ups, and a third one that pops up occasionally to bomb a few invaders for you and can't be shot. The last invader on each stage needs to be shot three times before it'll die, although each hit at least knocks it one level back up the screen. Most waves of invaders line up in a pyramid formation, but now and again there are special levels like Stage 8, where the aliens march straight downwards (like the bonus game in *Cosmo Gang The Video*), or Stage 15, where one very slow invader wanders around waiting to be blasted, finally generating a whole wave of enemies if you take more than 20 seconds or so to shoot it.



Furthermore, the last invader will sometimes act in very strange and unexpected ways – he might suddenly reverse movement and run away up the screen (in the same side-to-side pattern as invaders use for descending), or charge directly down towards the ground. Oddest of all, sometimes the invader will be beamed up by a Mystery Ship, only to return alongside six clone projections, which are visually indistinguishable from the real thing. Your bullets pass harmlessly through the fakes, and when you hit the real invader it switches bodies with one of the clones, until you've scored the three hits needed to kill it.

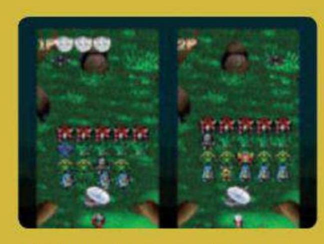
The second main *Ultraman* mode is a score attack game, with no continues. You can choose between nine characters, each of which has its own sound effects and unique order of attack waves (which all appear in traditional *Space Invaders* eleven-by-five formation). The different characters all have their own power-ups, including timed invincibility; *Galaga*-style twin ships; a diagonal bouncing shot, which reflects off the edge of the screen and wipes out anything in its path; homing missiles; and a devastating unlimited-use circular-saw blade attack, which can take out two columns of invaders in one shot. The game appears to be endless, cycling through attack waves until you run out of lives.



The third *Ultraman* mode is a Versus mode, which uses *Ultraman* graphics on top of the same Versus game as is present in the Original Game mode, so let's briefly take a look at *PD Ultraman Invaders*' own incarnation of the coin-op, which is remarkable in its own right. Sadly, it's mostly remarkable for its incredible shoddiness and the sound is inexplicably out of sync, with the trademark heartbeat starting before the invaders appear and continuing after the last one's been shot. Most spectacular, though, is Cellophane mode, in which the invaders are almost invisible behind ludicrously over-thick simulated plastic strips.



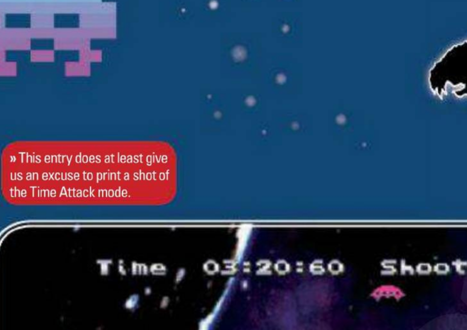
The only compensation is that the PS port has five-position high score tables with three-letter name signing, unlike any of the other ports of *DX*. However, it's not enough to rescue this mind-bogglingly dire rendition of the coin-op. (The Versus mode, by the way, in both original and *Ultraman* incarnations, is exactly the same as the one in the SNES/arcade version, still with no CPU-opponent option.) It's impossible to imagine the thought processes that went through the mind of the deranged, apparently blind programmer who coded that Cellophane mode, though.



PD Ultraman Invaders is a highly inventive take on the original game, with lots more happening than we've had room to cover here (the final mother ship battle in 1P Story mode may drive you mad, but we'll leave its particular twists and turns as a little surprise for any of you who are dedicated enough to get to play it – we wouldn't want to spoil your fun after all that effort), and if you can track down an import copy (and have some way of playing it) then it's a highly recommended purchase for all *Invaders* aficionados.







» This entry does at least give us an excuse to print a shot of the Time Attack mode.



1998
SPACE INVADERS 2000 (PLAYSTATION)

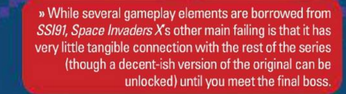
Taito's *Space Invaders* department went a little loopy around the turn of the millennium, leading to a tangled mess of misinformation on the internet (no change there, then), so allow us to clear it up for you – definitively, natch. First, in 1997 they put out a PSone release of *Space Invaders – The Original Game* which was an ultra-basic port of *Space Invaders DX*, lacking even the prettied-up versus mode graphics of the Saturn version that had come out a year earlier. However, the versus mode itself made a major step forward (see Invader Wars on page 164).

The very next year they released *Space Invaders 2000*, which was exactly the same game but with a time-attack mode added (and also demos of *G-Darius* and *Densha de Go! 2*, for some reason). Time-attack mode is a simple challenge in which you have to clear five different formations of invaders against the clock, prettied up a bit with the addition of backdrop graphics for each stage and a slight paintjob on the invaders themselves. It's a nice little extra, but people who paid for the time-attack-less version just a few months earlier were well miffed. Three more years later Taito would add further insult to that injury by releasing the same basic code again, except… well, you'll find out about that one shortly.

1999
SPACE INVADERS AKA SPACE INVADERS X AKA SPACE INVADERS EX (PLAYSTATION/PC/N64/GBA)

At the height of PlayStation's success, retro remakes suddenly enjoyed a brief period of popularity, in some ways seeming to offer a defining image of modernity by taking classic gameplay and dressing it up in state-of-the-art aesthetics. Activision was among the publishers at the forefront of the trend, buying up vintage properties like *Asteroids* and *Battlezone* as well as updating the likes of its own *Pitfall*, but the most ambitious undertaking was to reinvent the biggest game of them all. *Space Invaders X* (actually only the title of the Japanese release, with the GBA version adding the "E", but we'll use it here for clarity) explicitly sets the game in the Solar System (you start on Pluto and work your way in, *Gyruss*-style) and bizarrely all but turns *Space Invaders* into a puzzle game.

It works like this: if you 'chain' invaders of the same colour, they release specific power-ups (one-shot secondary weapons, which take out complete horizontal or vertical rows, diagonal bursts and so on), making the player think carefully about which is the best order to shoot the invading fleet in. Get it right and you can take out an entire wave in five shots. It's a clever idea, but the game's main problem is that even if you don't figure out the most efficient strategy, it's all too easy to blast through each planet's ten waves plus boss in a few minutes, so generously are you supplied with secondary weapons from chains and additional power-ups from the Mystery Ships. The graphics are dark and un-*Invaders*-y, the pace is rather ponderous for the PSone generation, and the game wasn't a hit.



» While several gameplay elements are borrowed from *SSI91*, *Space Invaders X*'s other main failing is that it has very little tangible connection with the rest of the series (though a decent-ish version of the original can be unlocked) until you meet the final boss.





The Definitive

SPACE INVADERS



» Rather pathetically, this fearsome-looking boss runs away if you shoot off his two little gun emplacements, rather than just crushing you like the bug you are.

1999
SPACE INVADERS AKA SPACE INVADERS X (GAME BOY COLOR)

While ostensibly a version of the Activision game, this has almost nothing in common with the other versions except for the name and the box artwork. Despite looking and (especially) sounding like a bad Amiga PD game from about a decade earlier, this isn't a bad little effort, overcoming several attempts by its own developers to ruin it. The double-tap movement system is a monumentally terrible idea, you'll thank God in heaven for the ability to switch off the eardrum-perforatingly dire music, and wading through 15 waves of invaders for each planet gets very wearying, but hidden underneath all that is a decent basic *Invaders* game that never lets up (partly due to the size of the GBC screen leaving very little room for manoeuvre and thereby keeping the player always under attack) and has a few fun power-ups to give you a fighting chance against the relentless onslaught. Given that there are level passwords anyway, the limited continues are another stupid and pointless inclusion, but at least you can crank them up to nine to minimise the amount of time you spend writing down tiresomely long passwords with a pen and paper.



2001
SPACE INVADERS XL (NUON)

Broadly speaking another port of the *Space Invaders DX* coin-op, this version for the doomed Nuon DVD player/games machine – the last ever official release for the console, in fact – offers a real lucky dip of *Invaders* goodies. In addition to the standard four types of classic *Invaders* game, there's a time-attack mode like that of *The Invaders* but with new graphics (though oddly you can't play the normal game with the new graphics), and the main one-player mode brings back the four core gameplay options from the Atari VCS version (zig-zag bullets, fast bombs, invisible invaders and moving bunkers) for the first time in 20 years. There's also fast and dynamic music for all the non-classic modes, including a variety of tunes from other Taito games like *Darius* (look for the track called *Scrab*) and obscure vertical shmup *Tokio* (*Dopel*), and the same versus game as Playstation's 1997, *2000* and *1500* versions.

2001
THE INVADERS AKA SPACE INVADERS 1500 (PLAYSTATION)

This is a very curious release. Put out by D3 Publisher as part of its extensive Simple Series budget label, it comprises mostly the exact same code as *Space Invaders 2000*. (Which makes the subtitle of *Space Invaders 1500* very confusing, unless you know that it's a generic suffix for the series, which sold for ¥1500. Adding to the confusion is the fact that '*The Invaders*' was actually the name of the most popular bootleg of original *Space Invaders*.) For the budget release, though, it was boosted by the addition of a whole new mode, which also happened to be the most substantial and significant updating of *Space Invaders* in a decade – *Space Invaders 3D*.

Taking the same basic tipped-forwards viewpoint as the Virtual Boy game, *SI3D* is in gameplay terms a remake of *Space Invaders Part II*. Apart from the fact that there are only seven columns of invaders, and the distracting way your defence bunkers flash every time you shoot, it's otherwise the same game as its 1979 ancestor – there are Splitters, Breathers, the flashing UFO alongside the Mystery Ship, the between-level skits and even the rainbow. (Though in a slightly different form – if you leave a bottom-row invader till last, he leaves a rainbow-coloured trail, but when you shoot him, rather than a big multicoloured rainbow flowering across the screen, you just get the word 'rainbow' printed in giant letters. The power of suggestion, ladies and gentlemen.) You can switch the view between five different positions, right down to a first-person view from inside your Laser Base, and each level is depicted as a colourful grid set over a new backdrop image. If you only get one PlayStation version of classic *Space Invaders*, this is the one to go for.



» You'll note we said 'new' graphics, rather than 'improved.'



» The first-person view is surprisingly scary, and not surprisingly hard.



» The graphics are pleasingly atmospheric. Well done, artists – if you're still at the same company, please pop over to the gameplay designers' cubicle and kick their faces in. Ta.

2002
SPACE INVADERS: INVASION DAY AKA SPACE RAIDERS (PS2)

To be honest, *Invasion Day* doesn't really belong in this feature. Originally a totally unrelated Japanese game called *Space Raiders* developed by Sammy, for some reason Taito decided to crowbar it into the *Space Invaders* universe for the Western release, presumably on the grounds that the plot and the basic left-right-shoot gameplay is sort of like *Space Invaders* a bit, ish. It's a third-person shooter, which takes the *Invaders* story out of the upper atmosphere and right down onto the streets, where you shoot at the alien monsters with rifles and grenades while hiding behind oil barrels in a back-alley guerrilla war, instead of the altogether more impersonal Laser-Base-and-defence-bunkers approach.

It's hamstrung by awful controls, which contrive to make *Invasion Day* awkward and uncomfortable, by intrusive loading, and by miserably feeble weapons and design which demands the player pummel the fire button around 50,000 separate times (and that's not some figure plucked from the air – we actually worked it out) to plough through about an hour's worth of game in story mode and get to what's actually a rather excellent plot twist at the end. The no-continues Survival game is decent high-score fun, but even then the gruelling bosses conspire to suck most of the enjoyment out of it.

2003
SPACE INVADERS COLLECTION (COLECOVISION/MSX)

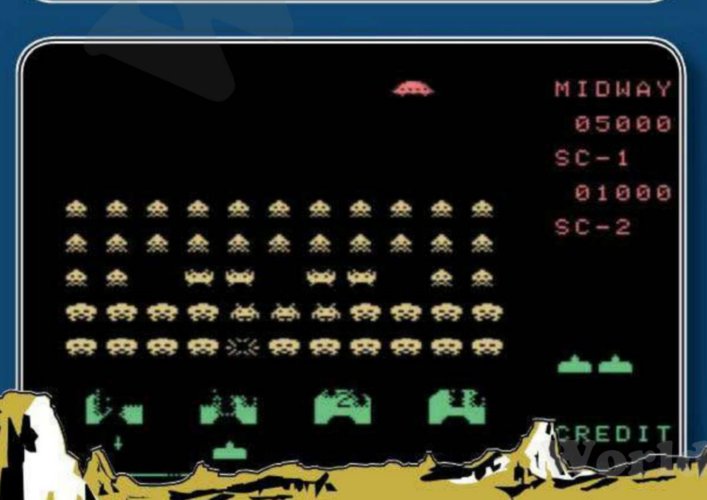
This release exists in a slightly grey area, and has one very notable feature. Opcode Games – actually it's only a single coder, Eduardo Mello – is a tiny little publisher specialising in converting old games to the Coleco and MSX and selling them (on actual cartridges, to run on the actual machines). The biggest and most complete Opcode project yet is *Space Invaders Collection*, a comprehensive port of arcade *Space Invaders*, *Part II* and *Deluxe*.

This, of course, makes *Space Invaders Collection* the only conversion of *Deluxe* ever released for a home format. When Taito heard about it they got in touch, but according to Mello, "Once they found about the size of the project, they just lost interest and never contacted [me] again". So it's fair to say that *Space Invaders Collection* has at least tacit approval, and therefore kind of counts as semi-official. In any event, it's a great piece of work, boasting pretty much arcade-perfect graphics and a painstakingly accurate replication of all the differences between *Part II* and *Deluxe*, as well as the opportunity to play original *Invaders* in Japanese-style colour or black-and-white modes, or the American version's simulated reflector mode with green bunkers and Laser Base (no backdrops, sadly).

2004
SPACE INVADERS ANNIVERSARY (PS2/PC)

This 25th-birthday release is basically yet another port of *Space Invaders DX*, though it has been suitably buffed up to look like something more considerable by putting it in a 3D-arcade front end with all the variant versions depicted as separate cabinets and adding some browsable archive material like flyers and original graphics sketches. There are even two separate versions of *Space Invaders Part II*, dubbed "upright" and "color", although both of them are in colour and there are no discernible differences between them at all except for the cabinet models. (In a really cute touch, *Anniversary* lets you zoom in or out to simulate standing nearer or further from the screen, showing the cabinet surrounds or even slanting the display to replicate the real-life viewing angle.)

The main attraction, though, is *Space Invaders 3D* mode. This is very similar to the seven-column, multiple-viewpoint 3D game included in *The Invaders* on PSone, except depicted in crisp, almost-wireframe graphics (with a single simple backdrop) rather than filled polygons, and largely based on original *SI* rather than *Part II* – there are Splitters (from level 4 on), but there's no rainbow trail if you leave a bottom-row invader to last, and no bonus when you shoot him. The (single type) Mystery Ship drops power-ups rather than scoring points – a speed up, a double shot and a one-hit shield – and at the start of level 9 your bunkers disappear, but otherwise it's a fairly standard version of *Space Invaders*.





» In another nice tweak, you can play the games amid a cacophony of simulated arcade noise, choosing from other people playing *Invaders* to ten other Taito games including *Bubble Bobble* and *Darius*.

The Definitive

SPACE INVADERS

INVADERS WARS

In either a commendable effort to liven up a series of ports with some genuine new content, or a cynical attempt to get completists to buy the same thing over and over again, depending on your viewpoint, practically every variant release of *Space Invaders: The Original Game* had a versus mode that was very substantially different from the one featured on every other release. Here's how the various implementations of two-player invading go…

On SNES the main objective of the versus game is to get your opponent invaded (though you can also win a round by clearing all the invaders on your side of the screen, as in most of the other versions). Shooting special coloured invaders has various effects – like causing your opponent's (or your own) invaders to descend a level or adding an extra row to the fleet attacking them – but they change colours if you don't shoot them quickly enough. Clearing a row of your own invaders also sends it over to your opponent, *Puyo Puyo*-style. Shooting the Mystery Ship swaps the two invader fleets over, encouraging the cunning strategy of deliberately getting yourself almost invaded, then dropping your opponent in your mess. Players can have independent settings (and therefore handicaps), for both numbers of lives (up to infinite) and invader starting height.



On the Saturn you get modern cutesy-style invader graphics, no bunkers, and your opponent's Laser Base appears at the top of screen where it can be shot – either being invaded or running out of lives will lose the match. There's thumping techno music and three selectable backdrops. Shooting the Mystery Ships now drops your opponent's invaders down three rows, and the special invaders either destroy a whole row, move the enemy invaders down or move both sets of invaders down.

The PC-Engine's versus game has no opponent at the top of the screen, no bunkers, an infinite-lives option, a



cartoon-girl backdrop (which is 'animated' in extremely rudimentary fashion at the end of a round and the end of the match), J-pop music and different power-ups (such as one that freezes the invaders on your side, and one that slows down the opponent's Laser Base). This time the Mystery Ship swaps the fleets over again.



The most impressive aspect of the PS/*2000*/*1500*/*XL* versus game is that it offers a CPU opponent for the first time (with three difficulty levels), but the game itself is another fairly radical overhauling. Now you're armed with a secondary super-laser, which is charged by shooting ordinary invaders and unleashes a big paint-splurge of a shot that passes through invaders without damaging them but robs your opponent (who's at the top of the screen again) of one of his three Laser Bases if it hits it (normal shots have no effect on the opponent).

The Mystery Ship still swaps fleets, and coloured invaders have the same effects as their SNES counterparts, but rather than just having fixed special invaders whose colours change, now the game also switches which of the invaders has that 'special' status, every few seconds. It's much faster-moving and more intense than the previous versions of the versus game (rounds can be over in a matter of a few seconds), and the various changes make it all but impossible to clear your screen, so this time it's all about getting your opponent invaded or destroying all his Laser Bases (you get a maximum of five lives, compared to 25 on the Saturn and up to infinite on the SNES and PCE). On the



Nuon alone, the action is accompanied by a random music selection from the game's soundtrack.

The versus mode in *Anniversary* is most closely related to the Nuon version, but has radical differences, starting off by ditching the music again. Even more so than the Nuon game, it's chiefly about shooting your opponent (it's possible to get invaded in *Anniversary*, but you have to try pretty hard). The invaders are mostly there as a source of power-ups rather than a danger – there are only 12 of them, clearing them all just makes another row appear, they don't fire at you, and indeed shooting them is almost counter-productive, since 'your' invaders act as an indestructible shield from your opponent's normal shots. Once more you get a super-laser with which to attack your opponent, this time obtained by zapping the Mystery Ship, and now to get the effects of shooting special invaders you have to blast three of the same colour in succession. For example, hitting three blue invaders one after the other generates a new row of attackers on your opponent's side, while three greens gives you another shot for your super-laser, which, unlike the Nuon game, carries its charge over between rounds. Even though you only get one life per round and either normal shots or the super-laser will take out your opponent's Laser Base, *Anniversary*'s versus is a tactical and cagey game and rounds can last a long time.



In all of the different versus mode variants, these are your two main options.



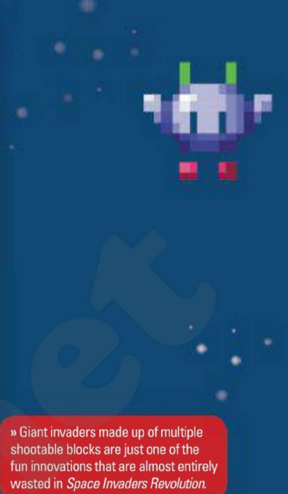
2005
SPACE INVADERS DS AKA SPACE INVADERS REVOLUTION (DS)

While not as bad as it was generally painted in reviews, this is a confused and depressingly penny-pinching release that could easily have been 200 per cent better with only 10 per cent more effort expended on it. You get a well-implemented classic *Invaders* option, but mystifyingly it's only available in the very uncommon colour incarnation, with neither mono nor reflector options available despite the title/menu screen actually showing the reflector version. (A real pity, as PSP's *Space Invaders Pocket* would have showed how lovely the reflector version could look on the small screen.) You also don't get *Part II*, or any kind of versus game, which could have worked superbly well on the dual screens across Wi-Fi. DS was practically made for a home version of Midway's 1980 release *Space Invaders 2*.

As well as existing for its own rather under-nourished sake, the classic mode also serves to unlock items for the remake version – as you accumulate points by playing classic *Space Invaders*, you make the six power-ups for the New Age available one at a time. Unfortunately, it's pretty easy to beat the New Age mode with no power-ups at all, and since there's no scoring in the updated version, no rankings, no time attacks or anything else, there's absolutely no incentive to go back and play it again once you've collected all the weaponry. It's a real shame, because the 20 varied stages of the New Age game contain lots of imaginative and fun twists on the *Space Invaders* theme, and if there was any reason to revisit them after the first runthrough, the game could have had countless hours of *WarioWare*-style replay value. As it is, it's a cynical half-finished rushed-out knock-off job.



» Giant invaders made up of multiple shootable blocks are just one of the fun innovations that are almost entirely wasted in *Space Invaders Revolution*.



2005
SPACE INVADERS: GALAXY BEAT AKA SPACE INVADERS EVOLUTION (PSP)

If human beings evolved like *Space Invaders Evolution*, we'd all have gigantic 20-foot deely-boppers growing out of our eyebrows, but no lungs. And while that would make for a swift extinction and therefore be tremendous news for every other living thing on the planet, it's not a great way to design a videogame. *Evolution* tacks a stupendously pointless rhythm-action element onto *Space Invaders*, and then implements this already-dumb idea so badly that by the time players encounter any microscopic semblance of challenge in the game, they're so old that the music appears to them to be nothing but the tuneless thumping of long-haired dropouts that they'd rather write complaint letters to the *Daily Telegraph* about than hit the fire button in time with. Unadulterated rubbish, sullied further by a truly dire port of original *Invaders*, and generally an affront to humanity. When you see games like this, you can't help but think we really do need to sod off and give the cockroaches a go.

2005
SPACE INVADERS POCKET (PSP)

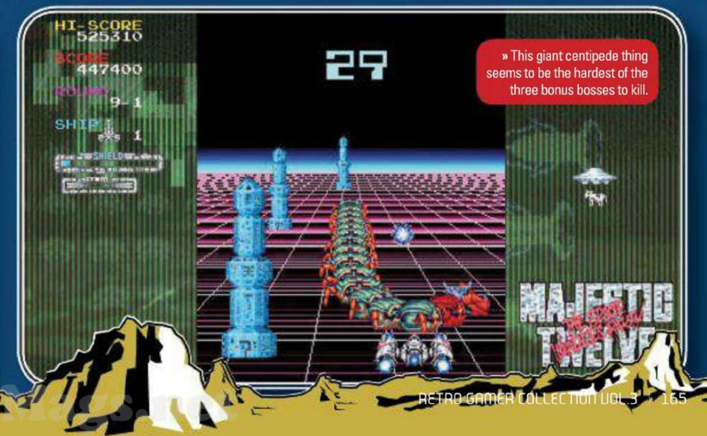
After that string of recent stink-ups, we hope to end this two-part Definitive feature on an upbeat note. So, who remembers how Part One ended? We talked about the original version of *Super Space Invaders 91/Majestic Twelve* and its mysterious missing 3D bonus sections? If you do, this fairly comprehensive Japan-only PSP compilation of *Invaders* games has a little surprise for you.

In addition to the traditional four Japanese versions of the original game (mono, cellophane, true colour and a rather pretty new take on reflector mode), alongside *Part II*, *Return Of The Invaders* and *Akkanvader*, *Space Invaders Pocket* includes a port of *Majestic Twelve* (the *SSI91* variant isn't available). But this is no ordinary port. Very very quietly, the port of *Majestic Twelve* on *Space Invaders Pocket* revives the original never-released arcade version, complete with the 3D boss fights.

If you battle your way through to the penultimate stage without using a continue (pretty easy to do, as the PSP version also seems to have ramped the difficulty down somewhat), then where you would normally encounter the third Cattle Mutilation round, instead you see the game as it was meant to be. Flying into the screen and dodging onrushing columns, you have 30 seconds to completely destroy one of several boss enemies. Which one you get seems to be completely random – we've seen three different ones, and it's not down to which route you take through the levels. If you manage it, you get 5,000 bonus points for every second remaining on the clock. To be honest, score-wise you'll almost certainly be better off with the Cattle Mutilation round, but that's hardly the point – what matters is that all these years after the event, you're finally playing the best ever *Space Invaders* game the way its designers wanted you to play it.



» Imagine spinning around looking at this screen forever. That's pretty much what the game is like.



» This giant centipede thing seems to be the hardest of the three bonus bosses to kill.

THE MAKING OF...

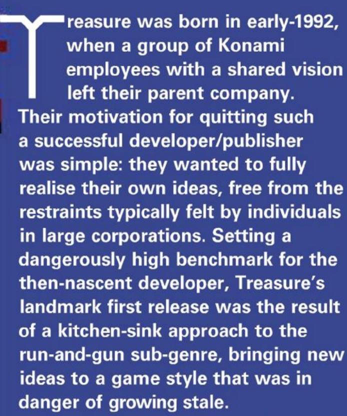
GUNSTAR HEROES



16 years after its debut on Sega's Mega Drive, Treasure's Gunstar Heroes continues to find new admirers through its presence on Wii's Virtual Console. Jonti Davies chats with Masato Maegawa, producer of Gunstar Heroes and president of Treasure, about the finer points of running and shooting through a 2D world







Treasure was born in early-1992, when a group of Konami employees with a shared vision left their parent company. Their motivation for quitting such a successful developer/publisher was simple: they wanted to fully realise their own ideas, free from the restraints typically felt by individuals in large corporations. Setting a dangerously high benchmark for the then-nascent developer, Treasure's landmark first release was the result of a kitchen-sink approach to the run-and-gun sub-genre, bringing new ideas to a game style that was in danger of growing stale.

Masato Maegawa, Treasure's president and *Gunstar Heroes*' producer, is an affable chap, completely modest (but realistic) about the strength of his team's productions. We ask him about the context of *Gunstar Heroes* – what led to its production? "We'd only just established our new company, Treasure, so we were just really keen above all else to do something that we liked and something that was our forte," says Maegawa. "*Gunstar Heroes* was that game. We approached the project with the concept of 'anything goes', and we incorporated many types of separate ambitious ideas in that concept."

Among those fresh ideas for the genre were numerical energy counters in place of the more common one-hit-you're-dead routine; symbolic colour labelling in lieu of character names; a heady blend of long and close-range attacks; a mishmash of auto-scrolling and player-led passages of action; weapons that could be mixed to form new attacking powers; and some of the most imaginatively constructed bosses to grace a videogame, regardless of vintage or genre, peaking in the inspired melding of a board game with a string of boss battles. To say that *Gunstar Heroes* was created with a notion of 'anything goes' is an understated simplification on Maegawa's part.

Gunstar Heroes begins with a suitably explosive cut-scene sequence, which details the plight of Gunstar 9, the planet on which most of the game is played out. Ambiguous scripting initially leaves the player with only a vague idea of what might be afoot. "WHERE IS HE? THAT LIGHT! IT'S TOO LATE!"... "NO!... THE EARTH... UNDER ONE PERSON'S



» There are some memorable characters in *Gunstar*, including Dr Black, who refuses to give up his gem after Red defeats him.



» Some ambiguous writing leaves much of *Gunstar Heroes*' world open to interpretation.

POWER…" is a classic, befuddling exchange from this opening scene. But it eventually transpires that Gunstars Red and Blue need to reclaim four gemstones in order to stop Smash Daisaku ('Daisaku' being Japanese for 'epic'), an evil dictator who looks a bit like *Street Fighter*'s M Bison, from using those gems to re-power a robot called Golden Silver, which had previously caused havoc by draining planets of their natural resources. Daisaku has even kidnapped Green, the elder brother of Red and Blue, who has been tricked into working for the enemy. Once the four crucial gems are retrieved, the heroic journey of Red and Blue eventually leads to the moon of Gunstar 9, where Red and Blue have to defeat the immense (3D-effect) Core Guard System, before a final multi-stage battle against the game's assembled cast of baddies brings Golden Silver out of its sleep.

In Red and Blue, two iconic videogame characters were born. With nomenclature bordering on the nondescript, they were never likely to capture the imagination of the population at large, but Red and Blue retain a certain mystique that still lights fires in the eyes of videogame connoisseurs. How did *Gunstar Heroes*' characters come to be named in such a way? Maegawa confesses that it wasn't his idea, but was in fact concocted by the *Gunstar* team's character graphics specialist, Han.

"Maybe for Han there was some deep meaning," Maegawa says, "but I think it's just a really good idea because it made it so easy for users to understand what was happening in the game."

"EVEN WHILE THEY REMAINED AT KONAMI, THE CORE MEMBERS OF TREASURE WERE REGULARLY GETTING TOGETHER TO PLOT A REVOLUTION"

Gunstar Heroes' development appears to have been a consummate team effort. Treasure has remained a small studio since its formation, and the first title to come out of Treasure was principally the work of just seven people. Maegawa speaks of the team in familiar terms, dropping their surnames and referring to them by the nicknames they use within Treasure to this day.

"There were only seven of us who worked on *Gunstar Heroes*: myself, as producer; Yaiman, who was the director and main programmer; Nami, who programmed the enemy AI and other routines; Han, who did the character graphics; Iuchi, who was responsible for the graphics; Non, who did all the music; and our sound effects man, Murata. It took us about ten months to develop *Gunstar Heroes* once we'd established Treasure, but even before that we'd meet in coffee shops and other places for planning sessions."

It's fascinating to visualise such coffee house meetings. Even while they remained at Konami, the core members of Treasure were regularly getting together to plot a revolution. And by finding Sega as a publisher, Treasure's coup d'état would soon be complete: *Gunstar Heroes* blew open the state of 2D platform-shooters, with Treasure rewriting the constitution.

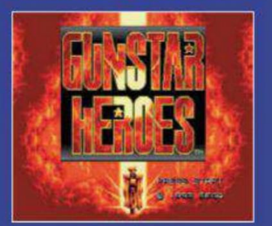
Treasure's deal with Sega was the result of a carefully planned proposal, which suggests that the results of the 'anything goes' approach were largely determined before development began. Maegawa is understandably satisfied with the outcome of events, and stresses that none of the ideas plotted in Tokyo cafes during 1991 and early-1992 were sacrificed or compromised in production.

"There was nothing missing from the final version of *Gunstar Heroes*. It ended up exactly as we first planned it – everything that was in our original specification and proposal to Sega was packed into the game that was eventually sold to players."

Mission accomplished, then. Working with Sega as a publisher, Treasure had full creative control – and that was key to *Gunstar Heroes*' success. Indeed, the only issue that resulted in a difference of opinion between Sega and Treasure was the relatively trivial matter of the game's name. Treasure had considered calling its debut project *Blade Gunner*, in honour of Ridley Scott's *Blade Runner*, but eventually settled on *Lunatic Gunstar*. Maegawa looks back on this matter with good humour.

"It's true that within Treasure we referred to the game as *Lunatic Gunstar*, right from the start," he says with a wry smile. "We felt that the word 'Lunatic' was a perfect fit to convey the

IN THE KNOW



» **PUBLISHER:** SEGA
» **DEVELOPER:** TREASURE, INC
» **RELEASED:** 1993
» **GENRE:** SHOOT-'EM-UP
» **EXPECT TO PAY:** A FEW QUID



» Like *Super Mario Bros 3*, *Gunstar Heroes* has a big airship and is proud of it.



THE MAKING OF... GUNSTAR HEROES



GUNSTAR VERSIONS

There have been five *Gunstar Heroes* releases. The original Mega Drive game appeared in September 1993. An inferior Game Gear version followed, featuring odd modifications such as a switch from mine carts to helicopter jetpacks in the Underground Mine stage; it lacked some of the original's content (most conspicuously, the Dice Palace level was dropped completely) and ran at a much lower frame rate than the Mega Drive version. An enjoyable sequel, *Gunstar Super Heroes*, was released on Game Boy Advance in 2005, but this, too, falls a little way short of the standard set by the Mega Drive original.

It wasn't until late-2006 that the first game resurfaced on Wii's Virtual Console, preserved in perfect form via the wonders of emulation. More impressive still, in February 2006 Sega of Japan had published the *Gunstar Heroes: Treasure Box* as part of its PS2-based *Sega Ages* series. The disc contained both the American Genesis version of *Gunstar Heroes* and the Japanese Mega Drive code, along with a subtly different prototype build and the Game Gear version (useful purely for reference).



DEVELOPER HIGHLIGHTS

ALIEN SOLDIER
SYSTEM: MEGA DRIVE, Wii VIRTUAL CONSOLE
YEAR: 1994

RADIANT SILVERGUN
SYSTEMS: SATURN, ARCADE
YEAR: 1998

GRADIUS V (PICTURED)
SYSTEMS: PS2
YEAR: 2004



exhilaration of our game, what with all the explosions and detonations; but that didn't go down too well with Sega of America, who thought that the word 'Lunatic' conveyed a really bad image. Anyway, the 'Heroes' part of the title came from Sega of America – they seemed to think that 'Heroes' was a cool term because it carried a notion of there being some great sense of justice in the game – so in the end we were requested to adopt the *Gunstar Heroes* title."

Irrespective of concerns over its title, Sega must have been happy to see the results of Treasure's early Mega Drive work, especially considering the limitations of the hardware. Maegawa recalls that Treasure had to work around the Mega Drive's limited palette to achieve the desired visual style in *Gunstar Heroes*. "Because of the relatively low number of colours the Mega Drive can display, we had various difficulties in doing what we wanted to do," Maegawa explains. "At first we were drawing the backgrounds with a single palette of 16 colours, but we thought the results looked too sad and desolate, so I requested that we draw scenery with two palettes, giving us 32 colours to work with, which is what we ended up doing."

Aside from the richness of *Gunstar Heroes*' extended palette use, effects such as the rotation and scaling of sprites were used expertly to create a sense of depth. Most impressively, there can be a dozen or more characters on screen and yet the frame rate holds up almost flawlessly throughout, regardless of how explosive the action is becoming. The transformations of the Green-controlled Seven Force boss show Treasure in a cocky frame of mind, juggling and spinning sprites as though they were going out of fashion (funny thing: they were). The faux 3D of the Core Guard System, too, was a spectacle of some note in 1993, its impact almost measuring up to the feats of contemporary FX chip-powered games over on the SNES.

Gunstar Heroes' soundtrack is also hugely impressive. The score shifts in pitch and tone quite dramatically, waltzing with the on-screen action without ever stepping on its toes. We ask Maegawa how such well-judged tunes were achieved in light of the ever-changing nature of the gameplay and its themes. "Well, the music producer was Non," Maegawa reiterates, "who is still here at Treasure. He always, without fail, waits for all levels of a game to be designed so that he can experience the movement of the whole game, and then he begins his composition. And that's how he was when we worked on *Gunstar Heroes*."



» The appropriately named 'happy item room' offers sustenance and weapons in the middle of The Dice Palace.

Another vital ingredient of *Gunstar Heroes*' unrelenting punch, often overlooked, is its clever use of sound effects. From the creaking of robotic bosses' limbs to the easily identifiable and distinguishable weapons effects, Murata's work almost sounds like percussion to Non's music. We ask whether Murata worked on *Gunstar Heroes* in the same manner as Non. "Yes," says Maegawa. "In a similar style to Non, our sound effects specialist Murata waits for everything else to be in place and functional before he begins, very slowly and carefully, to apply his sound effects."

Playing *Gunstar Heroes* today, it's difficult to imagine how contemporary publishers would react to its hotchpotch design. Of course, Treasure has virtual immunity in this regard, and can apparently still get away with releasing games that defy convention (see 2001's *Freak Out* on the PS2 for a prime example of bizarre game design being smuggled past publishers and out into retail), but this is principally because of Treasure's reputation – the basis of which was laid in *Gunstar Heroes*.

There are initially four stages to play through, but these can be approached in any order. Only after these levels have been completed and the four gems have been collected does *Gunstar Heroes* shift into a linear gear.

One of *Gunstar Heroes*' most inventive stages is the Dice Maze level, where Black beckons the player to his 'strange fortress', inside which is found The Dice Palace. A board game of sorts ensues, with Red and/or Blue throwing a die to move around a board containing spaces that lead to mini-boss fights, free weapons (received in the

» There is a sick side to *Gunstar Heroes*, with Smash Daisaku attempting to cause Red to crash by throwing live soldiers at him.




» Being able to shoot in eight directions, even when piloting the Empire's Space Craft, is something of a boon.



"AS DEBUTS GO, GUNSTAR HEROES IS A PHENOMENAL ACHIEVEMENT – FEW DEVELOPERS HAVE MANAGED TO WORK SUCH ASSURED MAGIC IN THEIR INITIAL PROJECTS"

'happy item room'), and fights without weapons (tricky). One space is reserved for the traditional board game penalty of reversing your progress, while the final space sets up a decisive battle with the Yakuza-styled Black, who shows up in his Beat Stepper robot.

"The dice stage is really experimental," Maegawa concurs, "and again it was under the idea of 'anything' being acceptable that we decided to throw a board game into the mix. But none of us are particularly fans of board games as such…"

Other levels are also experimental. For example, the Underground Mine stage is literally 'on rails', with the action switching to a ferocious pace as Red/Blue journey deep underground on high-speed mine carts. With parallel tracks at the top/bottom or left/right (depending on the section of track, progress through the mine can be horizontal or vertical), a jump to midair enables the cart to escape from the magnetic field of one track and enter the field of another, opening the possibility of upside-down mine cart control. Nintendo's recent *Super Mario Galaxy* has been lauded for doing a similar thing – *Gunstar Heroes* was clearly ahead of its time.

As well as experimental play concepts, there are radical and unexpected shifts in style. The first stage plays like a *Contra*-esque platform-shooter – but by the fifth level Red and Blue are piloting the Empire's Space Craft in what is ostensibly Treasure's first attempt at a horizontally scrolling shmup – but still retains the omni-directional shooting system found in all other areas of *Gunstar Heroes*. Again returning to the *Gunstar Heroes* team's enthusiasm for including anything/everything in Treasure's debut production, Maegawa explains how the game came to be such a diverse proposition.

"Because we had this concept of 'anything goes', we decided that if it was fun and interesting, we would put anything into the mix. And because of that *Gunstar Heroes* ended up having shooting, action and fighting elements."

This certainly wasn't development by numbers, though. In playing the game there is no sense that *Gunstar Heroes*' design was at all contrived; in many areas, such as its insistent flitting from automated scrolling scenes to movement-led platforming sections, the game almost seems deliberately prone to challenge and confuse players, rather than sweet-talking them into appreciation of its qualities. It appears to have been the product of a wild burst

TREASURE BEFORE TREASURE

We ask Maegawa to set the record straight: which games did he and his Treasure team actually work on while they were at Konami? Politely, he refuses, stating that he'd "rather not name specific titles, so as to avoid any potential trouble with Konami." Fair enough. "But I can tell you," he adds, "that I worked on Game Boy, Famicom and Super Famicom games for Konami while I was there." This didn't quite sate our curiosity, so we did some research – completely unaided by Maegawa, by the way – and discovered some rather startling revelations.

From what we've learned from our Japanese sources, Maegawa worked on the following games before founding Treasure: *Dracula Densetsu* (aka *Castlevania: The Adventure*, Game Boy, 1989), *Gun Sight* (aka *Laser Invasion*, NES, 1991), *Rollergames* (NES, 1991), *Bucky O'Hare* (arcade, 1992; NES, 1992).

Other Treasure members such as Yaiman, Han, Iuchi and Nami worked on these Konami titles: *Quarth* (arcade, 1989; MSX, 1990), *Aliens* (arcade, 1990), *Punk Shot* (arcade, 1990), *Akumajou Dracula* (aka *Super Castlevania IV*, Super NES, 1991), *Escape Kids* (arcade, 1991), *The Simpsons* (arcade, 1991), *Axelay* (SNES, 1992), *Contra Spirits* (aka *Super Probotector*, SNES, 1992). Iuchi also went on to do a gig as the level designer of Time Warner Interactive's bizarrely gruesome 1997 Saturn game *Shinrei Jusatsushi Taroumaru*.

» The Ancient Ruins stage is deceptive, easing the player in with a *Contra*-style run through a bright environment before… BAM!





THE MAKING OF... GUNSTAR HEROES

TOUGH BOSSES



Bravoo Man is built like a brick shithouse – or at least, he's been constructed from brick – but his moves are limited to a flying spin and clumsy kick.



Pink and a couple of sidekicks called Kain and Kotaro attempt to stop Red and Blue by blocking their path with the interestingly named Pinky Loader contraption.



Seven Force is piloted by Green, who guides it through seven transformations. Iterations include a golden gun, a blue phoenix, an iron man and a tiger.



This early mid-level boss is easily beaten, and can be attacked from positions on the robot's feet and under its body, as well as from above.



Smash Daisaku challenges Red to a fight on the wings of a helicopter (yes, a helicopter with wings) before making way for his bulkier comrade Orange to have a go.



Doctor Black appears as the final boss of his rather strange fortress, having already led Red/Blue through a board game full of challenges.



Smash Daisaku returns, this time with a jetpack and flame-thrower. He's easy to dodge, but he has more stamina. He's all that stands between Red/Blue and the moon.



Seven Force doesn't look quite so threatening when seen in space, but it really zips about the screen and is certainly not an easy enemy to defeat.



The Core Guard System is one of *Gunstars*' few self-explanatory features. It launches a series of attacks, such as chains of orbs and miniature spacecraft.



The final boss series leads up to a fight against the revived Golden Silver robot. Before that, all of the game's main enemies reappear in sequence.



Golden Silver presents *Gunstar Heroes*' final challenge. It's effective to grab and throw him, but it's also essential that you shoot at the four gems to drain Golden Silver's power.



» Care for a piece of Gunstar Gum? Never mind in-game advertising – *Gunstar Heroes* did in-game self-promotion.

of creative thinking, and not the result of any focus testing or considerations of marketability. Maegawa confirms Treasure's slightly random and carefree methodology. "We didn't really bother about the details of how each stage was being developed," he says, "but we produced each scene with a different attitude, which led to there being plenty of variety in the game. I feel that as a result of this approach the overall balance came out really well."

Variety was also seen in the game's weapon system, which starts from a base of four weapon types (Force, Lightning, Chaser and Fire) but expands to 14 variations via the mixing of different weapon types. Red/Blue can choose one weapon initially, but have space in their primitive 'inventory' (displayed at the top of the screen) to hold two weapons simultaneously. Each of these weapons can be used in isolation, if so desired, or the two can be used in combination; the three choices on offer from each brace of weapons can be cycled through mid-game by holding A and B. It's an effective system, encouraging tactical use of weapons. Rather than simply give the player a procession of increasingly powerful weapons, Treasure decided to spread *Gunstar*'s range of attacking options in a more imaginative way.

"We developed the weapon combination system like that," says Maegawa, "because we wanted players to discover their own ways of getting through stages, and for them to have lots of different experiences according to which weapons they were using on which levels. The weapons become different when you go from Easy mode to Expert mode, as well."

As with many subsequent Treasure titles, *Gunstar Heroes* is not a huge game when measured in terms of how long it takes to get to the credits – it can be played through in an hour, if you're good – but it presents such a wealth of diverse ideas during play that it manages to project an unfeasibly large personality. This is a game, which, once played, cannot be forgotten.

The most memorable scenes in *Gunstar Heroes* are probably its boss encounters (it soon became apparent that boss design was one of Treasure's greatest strengths, as was evidenced by such incredible sights as that of the Creator in *Radiant Silvergun* and the interplanetary conclusion to *Sin And Punishment*), which span the gamut from a brick man in the form of Bravoo Man to a midget called Minion Soldier. Maegawa recognises the importance of these characters to the game's enduring appeal, citing the



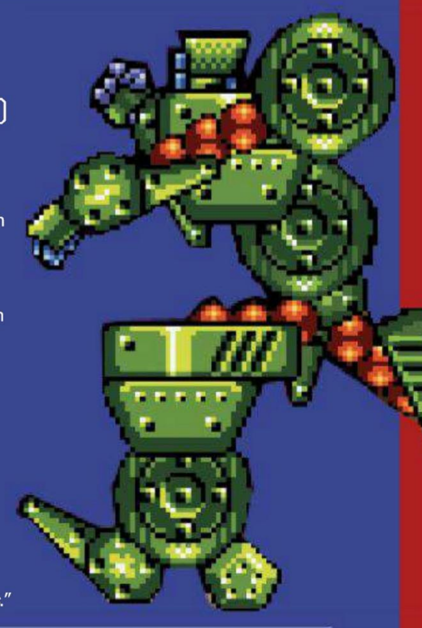


» Red's rather confused, he was sure that there was some way of getting to the exit. He just could remember how to reach it.



» Mini-bosses are peppered throughout every level of *Gunstar Heroes*.

"WE FELT THAT THE WORD 'LUNATIC' WAS A PERFECT FIT TO CONVEY THE EXHILARATION OF OUR GAME, WITH ALL THE EXPLOSIONS AND DETONATIONS; BUT THAT DIDN'T GO DOWN TOO WELL WITH SEGA OF AMERICA" MASATO MAEGAWA ON THE NAMING OF GUNSTAR HEROES



impact of *Gunstar Heroes*' bosses on players who make the effort to explore all corners of the game. "As you might expect," he says, "my favourite boss is probably the famous one: Seven Force. The seven transformations are absolutely worth seeing."

Describing features of *Gunstar Heroes* as being 'worth seeing' is wholly appropriate in a game whose overarching theme is ultimately less to do with story and more obviously centred on the fireworks of destruction. 'Anything goes' might be one recurring ideal, but the notion that 'more is more' also had an influence on Treasure's work here, and the studio's fondness for creating spectacular set pieces has never gone away. Maegawa retains a childish appreciation of pyrotechnics, along with an understanding of the power of scale.

"My favourite aspects of *Gunstar Heroes* are the way in which scenes and stages become progressively more expansive," Maegawa smiles, "and the sense of exhilaration that comes from seeing so many explosions! I think that was really refreshing for many players."

Time has been kind to *Gunstar Heroes*, and it deserves its place in the highest rank of Treasure's consistently excellent output over the past 15 year. As debuts go, it's a phenomenal achievement – few developers have managed to work such assured magic in their initial projects. For Maegawa and friends, the creation of *Gunstar Heroes* was a cathartic experience, with their newly acquired independence fuelling their enthusiasm. We ask Maegawa if Treasure faced any difficulties in adjusting to its work as an independent developer.

"There isn't any particularly trying episode that I can recall from the development period – it all went really smoothly. But as we'd just established Treasure, we were of one mind in thinking 'At last we can make the exact kind of game that we love.' We were completely absorbed in making our game and all thoroughly enjoying the project. That's what I remember foremost about making *Gunstar Heroes*."

» Under siege from all directions and yet still in with a fighting chance.



» Green realises how stupid he's been and decides to make amends with a kamikaze attack on Golden Silver.



BUGGY BOY

IF ONLY ALL RACING GAMES WERE LIKE THIS



- » **PUBLISHER:** ELITE
- » **RELEASED:** 1987
- » **GENRE:** RACER
- » **FEATURED HARDWARE:** C64
- » **EXPECT TO PAY:** £2+



HISTORY

Isn't it amazing what you can do with technology? When *Buggy Boy* was first announced for the 8-bit systems few could have guessed that Elite's coders would be able to successfully capture the spirit of the original arcade game so perfectly.

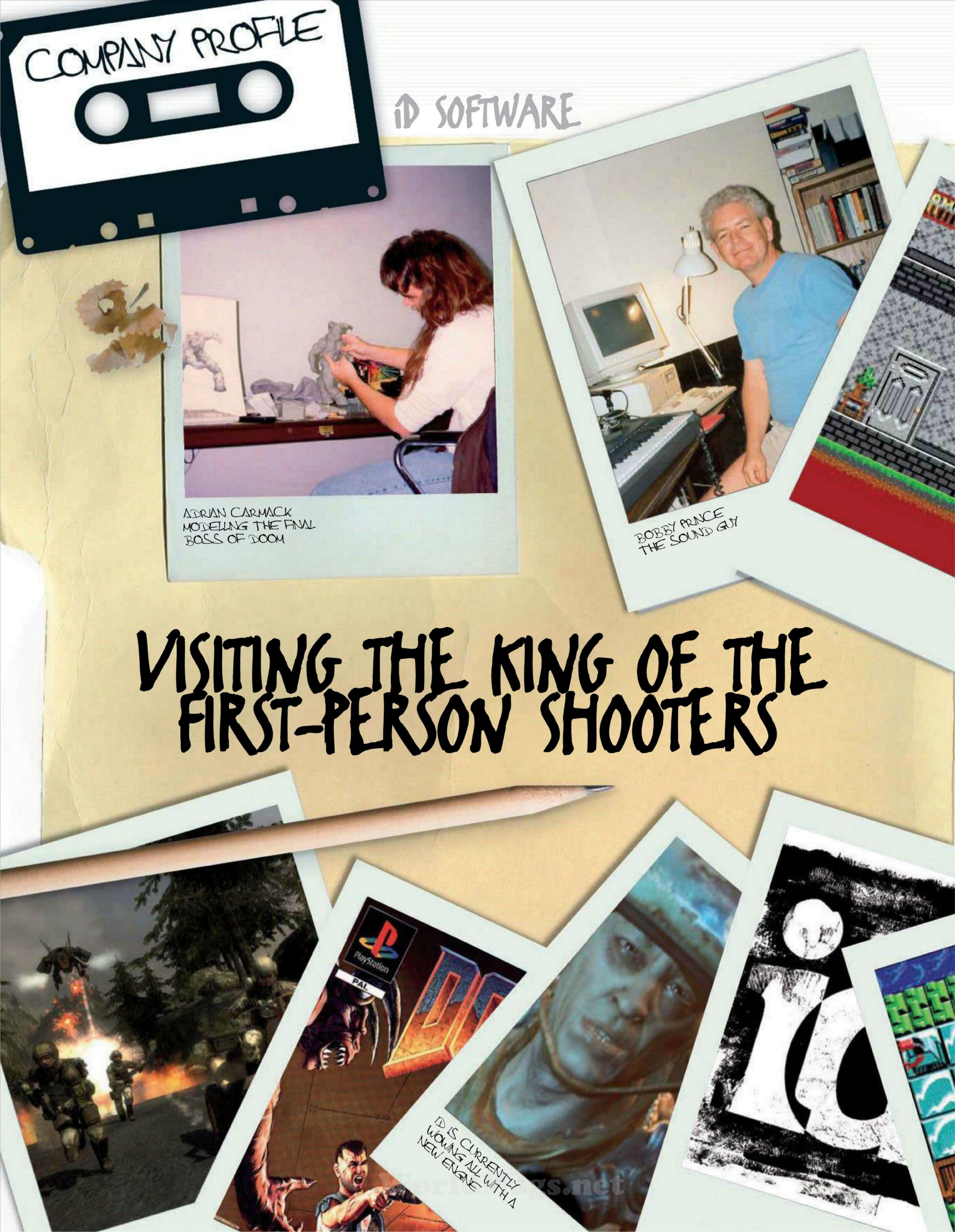
Capture it they did though, and while there were plenty of solid conversions of the Tatsumi coin-op (we've fond memories of the Amiga outing), Dave Thomas's Commodore 64 conversion was arguably the best. Sticking two fat fingers up at its peers, C64 *Buggy Boy* was quite simply brilliant and an amazing time waster for a wet and miserable day. Spread across five courses, with each consisting of several lengthy checkpoints, you were required to do little more than race to the finish line as quickly as possible.

Here's the catch though – you only had a limited amount of time to complete each checkpoint, and considering the number of hazards on each track, this was far from easy. Tree logs, boulders and water hazards were just a few of the obstacles to get in your buggy's way, and it took real skill and ingenuity to complete some of the later courses.

Fortunately, by passing through certain gates it was possible to increase your time by a small increment, while other gates awarded you with extra points. The devilishly designed tracks, however, meant that only the most skilled (or bravest) players would attempt to collect everything, while the balanced difficulty curve meant you were always returning for one more go.

It may not have been able to replicate the panoramic three-screen view of the arcade original, but there was no denying that the C64 port was a delight on the eyes. Bold, bright and chunky, and running at the sort of speed that had Spectrum and CPC owners looking on in envy, C64 *Buggy Boy* was an impressive beast that proved there was plenty of life in Commodore's beige box.


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iD SOFTWARE

VISITING THE KING OF THE FIRST-PERSON SHOOTERS

ADRIAN CARMACK MODELLING THE FINAL BOSS OF DOOM

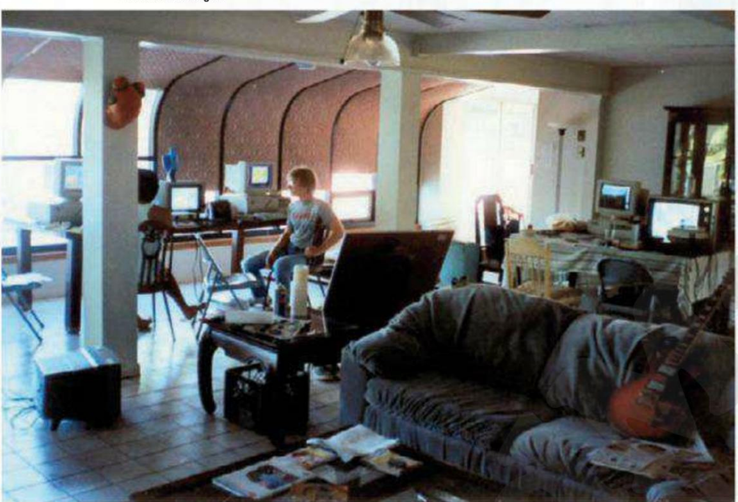
BOBBY PRINCE THE SOUND GUY

ID IS CURRENTLY WOWING ALL WITH A NEW ENGINE



Nothing is simple in the world of id. Controversy surrounds almost every milestone that it has achieved throughout the 16 short years of its existence, as Mike Tooley discovers. Even its name, id, is an area of much debate and circumspect idealism as it comes from Freud's primal face of the human psyche, underpinned by the driven instinct that Freud alludes to in his writings. The original logo, however, was ID and stood for 'ideas from the deep'

» Where it all began



The id lineage didn't start with the birth of the company; it started at Softdisk, the monthly disk magazine based in Shreveport, Louisiana.

Tom Hall joined Softdisk in 1987 as a games programmer. Natural growth created the need for additional staff and John Romero joined in 1989. John Carmack was working full-time in a pizza bar back in Kansas; coding was just a sideline for him. As a subscriber, he loved the games that Romero had brought to Softdisk and subsequently sent his own work in. Eventually he, too, made the trek to Shreveport. The two Johns were put to work together, and a synergy emerged between them that carried over into id. Softdisk didn't allow interaction between teams, but so enamoured was Tom with the two Johns that he would go to their office after hours in order to code with them.

It wasn't long before Carmack created a routine that gave the appearance of making the PC scroll (to that point PC gaming was the domain of flick screens). As a joke, Carmack and Hall stayed late at the office one night, where they re-created the first level of *Super Mario 3*. Pixel perfect, the game was left on Romero's desk adorned with the title 'Dangerous Dave In Copyright Infringement'. Smiling, they headed off to get some sleep.

Romero booted the game up and went wild with excitement. Instantly he knew what this meant for gaming. Romero took the game to his section manager, Jay Wilbur, who championed it, first to his bosses and then to Nintendo. Neither company could see any potential to bringing this style of game to the PC – Mario was to remain a console icon. Unperturbed, the Softdisk trio continued to develop the game themselves, with Tom Hall recalling those halcyon days. "Softdisk didn't want to use the smooth scrolling trick Carmack had discovered, so we thought 'Well, if they don't want it, we could do something ourselves… Hey, we'll make our own game'. I asked if they cared what topic – sci-fi, fantasy, whatever. I think Carmack mentioned a kid that saves the galaxy or something. I went off and 15 minutes later came back with the story for [*Commander*] *Keen*."

It was at this point that John Romero's ego took a knock. Romero took great pride in his fan mail, and had taken to hanging the letters around his workspace. One morning while re-reading the letters, he noticed that there was a recurring address – someone, he thought, was having fun at his expense. A strongly worded letter was drafted and sent to the offending address. It turned out to be Scott Miller's home address, he had used fan mail to circumvent filtering of the Softdisk mailbox. Companies at that time were incredibly nervous of their staff being poached and as such didn't allow incoming calls or letters from other companies to reach their target.

Scott Miller had recently founded Apogee Software, a shareware company, and wanted Romero to supply games for Apogee to distribute. Romero sent *Catacombs* to Miller, who, suitably impressed with the game, started to distribute it. Romero, Carmack and Hall worked around the clock, on borrowed equipment to complete their first opus. Intrigued, Miller paid them a visit. When he saw the *Mario* clone running, he offered to finance the rest of development. The Softdisk trio asked for $2,000 to get the project finished. With only $5,000 in the bank, Miller quickly wrote a cheque for $2,000, such was his belief in their capability.

It took three months of slaving away, working at Softdisk by day and on their game through the nights. Adrian Carmack (no relation) was brought in to refine the process – at Softdisk his graphical talents had long been admired by both Johns. On 14 December 1990, *Commander Keen* was launched. The first level was free, with gamers being required to buy the later levels. The gaming press and gamers loved it. Four short weeks after *Commander Keen*'s release, the first royalty cheque arrived for $10,000. The two Johns took the owner of Softdisk to lunch to tell him they were leaving, and added that they would be taking Adrian Carmack, too. Once they returned to the office, they told Adrian that they had

IN THE KNOW

id Software's story begins at Softdisk, a monthly magazine where John Romero and John Carmack worked. The two Johns went on to form id Software with Adrian Carmack and Tom Hall and soon set the gaming world alight with amazing first-person shooters like *Wolfenstein 3D*, *Doom*, *Quake*, and more recently *Quake 4*. It's recently announced a brand new game engine.



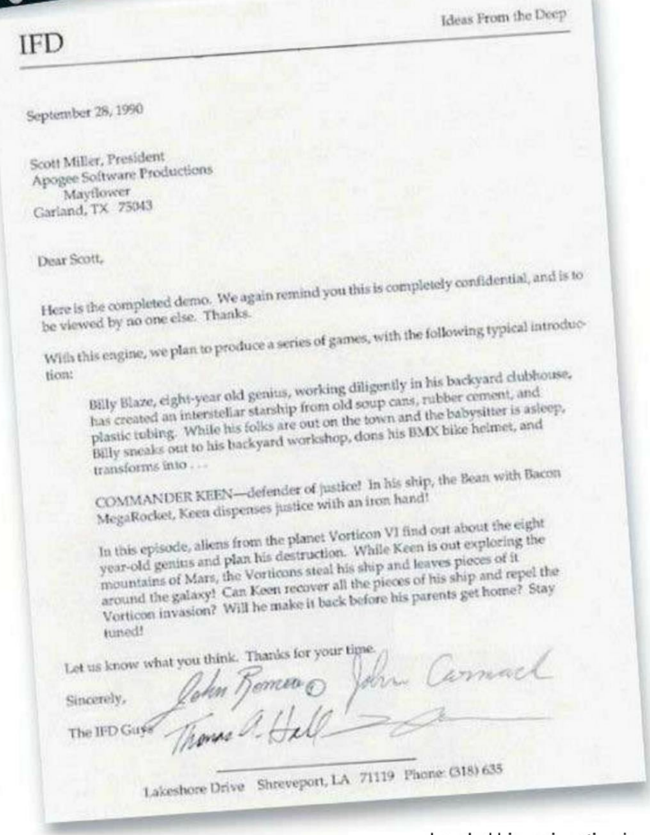
» *Wolfenstein 3D*, id's first, first-person shooter. More greatness would follow.

JOHN BLOGS

More than any other company, id has always pursued an open-door policy. From the very early days it used feedback to tailor its future games. As id blossomed and the internet grew in popularity, the id team made their email addresses available to the gaming community and answer emails personally. Soon, though, the numbers became too great so Romero and Carmack created very early blogs where gamers could leave feedback and engage with the two Johns during down time. Carmack found this especially useful as a forum for discussing technologies, sharing tips and secrets while having an army of troubleshooters to help with any possible problems. These blogs took a new twist when the two Johns bought their first Ferraris. Now, as well as charting their game development, they would post speed times taken on the local airstrip. This grew into the whole id team racing, and eventually id invited other softcos down for speed trials. Check out Planet Romero to see this in living colour.



iD SOFTWARE


IFD

Ideas From the Deep

September 28, 1990

Scott Miller, President
Apogee Software Productions
Mayflower
Garland, TX 75043

Dear Scott,

Here is the completed demo. We again remind you this is completely confidential, and is to be viewed by no one else. Thanks.

With this engine, we plan to produce a series of games, with the following typical introduction:

Billy Blaze, eight-year old genius, working diligently in his backyard clubhouse, has created an interstellar starship from old soup cans, rubber cement, and plastic tubing. While his folks are out on the town and the babysitter is asleep, Billy sneaks out to his backyard workshop, dons his BMX bike helmet, and transforms into . . .

COMMANDER KEEN—defender of justice! In his ship, the Bean with Bacon MegaRocket, Keen dispenses justice with an iron hand!

In this episode, aliens from the planet Vorticon VI find out about the eight year-old genius and plan his destruction. While Keen is out exploring the mountains of Mars, the Vorticons steal his ship and leaves pieces of it around the galaxy! Can Keen recover all the pieces of his ship and repel the Vorticon invasion? Will he make it back before his parents get home? Stay tuned!

Let us know what you think. Thanks for your time.

Sincerely,

The IFD Guys

John Romero John Carmack Thomas A. Hall

Lakeshore Drive Shreveport, LA 71119 Phone: (318) 635

» The letter that started it all.



» John Carmack at Quakecon 2006.

CON OF CONS

Quakecon came from gamers and modders joining forces, and evolved from various *Quake* and *Doom* fansites. It's hard to pinpoint exactly where it started, but the genesis was E3 in 1997. Before the *Quake* release, id put three free downloadable levels on its website. This provided a public beta and also allowed gamers to practise for the competition that Carmack was organising. Open to all, a series of *Quake* tournaments took place across the US. The winners met for a final at that year's E3, and the champion, Thresh, drove away in Carmack's beloved Ferrari. Professional gaming was born. Since then, Quakecon has become an annual event for the community. Check out some of the speed runs at Quakecon.com

handed his resignation in on his behalf. Bemused, he didn't argue and duly followed them out of Softdisk. Now the four would be equal partners and id Software would begin proper on 1 February 1991.

A hangover from the hasty departure from Softdisk was that id would have to release a game through Softdisk every two months to ensure the continuation of the publication. This would remain in place until Softdisk could replace the departed team. "As part of leaving, we agreed to do games so the Gamer's Edge product could continue," explains Hall. "At the time, I really didn't want to do a *Keen* for them, but we needed a ramp-up for the next *Keen* trilogy. I was eventually convinced. We were doing this game and some other game at the same time. It was kinda crazy. But doing all those different types of games – puzzle, shooter, platform, and so on – was incredible training. You'd have to work for a decade on normal-sized games to get that experience. We did it in a year." To id this was a small price to pay for its freedom and it soon advanced the company beyond measure. Romero modestly describes this period as "great times… nothing can come close to my memories of our little tight-knit team working furiously with a single goal in sight and having plenty of talent to achieve that goal in record time. It was the beginning of a new age, for us… and the entire industry."

For the rest of 1991, sequels to *Keen* ensued while Carmack perfected his new Ray Casting technology, which enabled the creation of 3D worlds. Two Softdisk games would feature this technology as id fulfilled its contractual obligation, and as Carmack refined the engine, *Wolfenstein 3D* took shape. To id it was a sequel to a game by Silas Warner (*Castle Wolfenstein*) that they loved as kids. Development took longer than expected and so Apogee created the final games for Softdisk on id's behalf, freeing the team to focus on *Wolfenstein*. The Warner original was a stealth game, but sensing that with a game engine as fast as theirs people would want action, all stealth modes were eventually dropped and replaced by a high-octane killing-fest. The first-person shooter had been born. Banned in Germany, and targeted by animal rights protesters, the game brought id more than a few column inches outside the gaming press. id now walked hand in hand with notoriety.

Jay Wilbur had recently moved to id from Softdisk and took over many management tasks at the fledgling company. Full of marketing know-how, he milked the press attention for all it was worth. Romero and the team quickly assembled and released a sequel named *Spear Of Destiny*, while Carmack ported *Wolfenstein* to the SNES. It was during this time that Carmack learned a 3D trick that would enable the creation of the game engine that would become id's watershed, the *Doom* engine.

Nobody worked harder than id at that time – the company was all-consuming – and as tensions spilled during *Doom*'s gestation, friendships frayed. Tom Shaw became id's first casualty. His relations with John Carmack were at a low, and he was reticent to commit even more time to the company. Eventually Carmack and Adrian decided that Shaw should go. Less than happy, it was left to Romero to tell his friend – something he never recovered from.

In early-1993, Sandy Petersen was brought in to replace Tom Shaw. A 37-year-old veteran for Microprose, it didn't take long for him to impress his new bosses with his level design. While Carmack refined the *Doom* engine,


» Tom Hall at Softdisk.

Romero and Petersen designed some of the most fiendish levels gaming had seen, while Adrian created a hellish horrorscape. Sound would be a problem. Because all the resources at id were going into game creation, sound tools had been overlooked. *Doom*'s sound engineer, Bob Prince, reveals: "With *Doom*, I was supposed to have some software that would allow me to do plug sound effects and music in, but it never got programmed." Eventually Romero found a way around this, as Prince explains: "I depended on John Romero to plug the sounds in for me, and I could then see if they fit for timing. If they didn't, I would try to get a mental picture of what was wrong, correct it on my computer, save it on the network, and then John would plug it in for another trial."

By late-September 1993, Romero thought that the game was complete. When Carmack reminded him that they had promised the world network play, an impossible crunch time ensued. This was followed by a realisation of what id had actually done, modestly illustrated by Romero, who shouted "this is going to be the f***ing coolest game that the planet Earth has ever f***ing seen in its entire history!" And at midnight on 10 December 1993, gamers had to agree.

Doom was a massive seller, shifting over 2 million units in 18 months, and bringing id $23 million in the US from that initial sales period.

From here id's numbers would swell. The likes of American McGee and Tim Willits joined and set straight to work on the various sequels, each as successful as the last. *Doom* and id had made videogame history and in the process changed the way games were played forever.





» With *Doom RPG* and *Orcs & Elves*, id is reaching mobile gamers.



» They worked and played air guitar harder in the early days at id.

LUNCHTIMES WERE SPENT PLAYING FATAL FURY AND DOOM, WHILE THE REST OF THE DAY WAS SPENT ON DESIGN

John Carmack, however, was becoming isolated from the rest of the team. While id rode high on the success of *Doom*, he could see the flaws in the engine. He had long since started work on a follow-up that would be used in the next id game *Trinity*. *Trinity* soon morphed into *Quake*, and the id team had a field day populating the engine. Mike Abrash was brought in to ensure that the game ran as quickly as technology would allow. Enamoured with *Doom*, a young Trent Reznor approached id to score *Quake*. With the Nine Inch Nails being constantly on the play list at id, Reznor was an easy fit and id was quick to secure his talents.

Everything was in place. Lunchtimes were spent playing *Fatal Fury* and *Doom*, while the rest of the day was spent on design. It seemed id had held onto its identity despite its success, so when Carmack told *Wired* magazine in 1995, "*Quake* will be bigger, badder and better than *Doom* in every way", the gaming world could be forgiven for thinking that all was well within.

It later came to light that John Carmack thought the other id guys were not working as hard as he was – probably true given his predilection to coding in 20-hour sessions seven days a week. This led him to remove the separate offices and doors from id: it was now a one-room company. As one team, they worked closely together like they did at Softdisk. Romero baulked at this but carried on regardless, feeling for the first time at id the same oppression he'd felt at Softdisk.

Romero and John Carmack had long argued over the merits of design versus technology – Romero being the consummate game designer and Carmack the stellar professor. And while Romero bathed in the adulation of the *Doom* faithful and became a gaming legend, Carmack dissected line after line of code looking for ways to improve performance, unable to accept that gamers loved *Doom* without it being perfect. In short, Carmack loved the journey and Romero the destination.

On 22 June 1996, *Quake* was released. It was technological revelation and gamers flocked to it, the press responded well and it went on to set the sales charts alight. Immediately after *Quake*'s release, Todd Hollenshead joined id and focused on creating expansion packs and platform transitions. Carmack started work on the technology for *Quake II* and began transferring the engine to different machines, while the rest of id focused on the design for a sequel. Romero was directing *Hexen* and *Heretic* at this point, the first time id had used the engine licence model, and with numerous press and community engagements there was scant time for id proper.

Things had come to a head and Romero was forced out of id. John Carmack summarised: "The bottom line came to be that Romero had reached his level of success and wasn't pushing as hard, so we fired him."

Over the next couple of years id would bleed staff, many leaving to join Romero and Hall at Ion Storm. Undeterred, Carmack kept pedalling. Such was the lure of id, Carmack found it easy to replace staff with the best the industry could offer. In 1997 *Quake II* was released. An incredibly diverse single-player game was bolstered by up to 32-player deathmatches. The game cleared 1 million units in six months, quite a feat considering most people had to upgrade their PC to play it.

Two years passed and the series was furthered again, *Quake III Arena* moved gaming on. This time the whole game was deathmatch-based. Still the standard by which all multiplayer games are measured, *Quake III*'s game engine quickly became the most licensed in the world.

Sales were good but creativity was slow at id from 1999. With Carmack creating a totally new engine too much time passed before a new game was readied. Recently promoted CEO Todd Hollenshead brokered a deal with Nerve Software and Gray Matter Interactive to create a new *Wolfenstein* game. This collective effort resulted in *Return To Castle Wolfenstein*, a remake without compare. The story brought a supernatural twist to the Second World War, and quickly became the biggest-selling game of 2001.

Although the next few years seemed an unproductive period for id – such was the revolution that lay beneath – it would take longer to develop the engine than planned. Internet rumours were rife: Carmack quits, id is over, id split over game format, the list goes on. The internet doomsayers found more fire when Trent Reznor quit as sound engineer and id failed to reach an agreement with Bob Prince to re-use the sounds of the earlier games. Nevertheless in 2004, *Doom 3* was released. A tribute to the original, the design perplexed gamers. It wasn't a frag-fest but the game Carmack had wanted *Doom* to be first time around: a survival horror. For the first time id had divided its audience.

id Software has since released little bar a few mobile releases. Raven was handed the coding rights to *Quake 4* and *Enemy Territory: Quake Wars*. It also announced next-gen title *Rage*, which is due to be a 50/50 split between an FPS and a driving/action game. The studio was also recently acquired by Zenimax Media, although Carmack is still aboard. No doubt prepared to propel the studio forward to even greater achievements. One thing is for sure, id Software isn't going anywhere.

MOD GODS

id arguably pioneered the modding community. John Carmack deliberately made the protection in his games easy to circumvent, and soon after *Doom*'s release the first mods started to appear. Some impressed id so much that they were used in later *Doom* games and the modders were hired. id also made the source code for its games freely available. That's why there are so many unofficial versions of id games on formats that didn't receive official releases: *Quake II* on the PSP, for example. Carmack has a magnanimous approach to other coders and even today still helps them to improve the older game engines. Many third parties have released commercial games under licence from id: id supplies the engine and tools, and the third party puts a game world over it.



» *Final Doom* in all its chainsaw-spattered glory. Dare you play it?





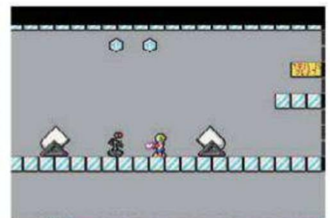
iD SOFTWARE

THE GAMES OF ID SOFTWARE



COMMANDER KEEN

» Commander Keen's very first adventure, and the debut of id's groundbreaking side-scrolling technology. Eight-year-old Billy Blaze dons his brother's football helmet and home-made spaceship to become Commander Keen, Defender of the Earth. *Mario* for the PC.



KEEN DREAMS

» Trapped in a land where giant vegetables rule the day, you must fight your way through an army of vicious broccoli beasts, savage asparagus warriors and a bushel of other leafy green nasties before battling the fiercest spud of all, King Boobus Tuber.



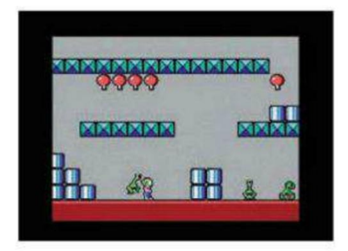
COMMANDER KEEN GOODBYE GALAXY

» You are eight-year-old Billy Blaze, boy genius to your neighbourhood, Commander Keen to the rest of the universe. It's time to grab your trusty pogo stick and neural stunner, climb into the cockpit of your home-made mega rocket and blast off for the Shadowlands.



COMMANDER KEEN: ALIENS ATE MY BABYSITTER

» A mean bunch of hungry aliens have your babysitter and they're planning to make her their main course. Now it's up to you, Commander Keen. Save her or risk explaining what happened, to your parents. Can you complete your mission before dinnertime?



RESCUE ROVER

» Your dog and best friend, Rover, is snatched by evil robots. You must journey through 30 mind-bending, deadly robot rooms and rescue him. Each room is patrolled by various types of robots, which you have to avoid, trap or destroy. You have to move items around to clear a path to Rover and lead him back to the exit.



RESCUE ROVER 2

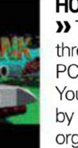
» Your faithful dog, Rover, has once again been dognapped by the evil robots. They're back and they mean business. Hopefully, you're much smarter than they are. The puzzle-action gameplay is similar to the original but set in all new, extra challenging robot rooms with new types of traps to avoid.



DANGEROUS DAVE IN THE HAUNTED MANSION

» You're a one-of-a-kind dangerous guy named Dave. You're quite deft with a shotgun, and afraid of nothing. As you hunt for your lost little brother, Delbert, you must enter a house full of zombies, spooks and bad guys.





HOVERTANK 3D

» The first three-dimensional PC game ever! You've been hired by an unknown organisation to rescue people from cities targeted for limited nuclear strikes. With an energy cannon as your main weapon, you must race against the clock, blasting away at nuclear mutants and armoured patrols.



CATACOMBS 3D

» This game takes the technology in *Hovertank 3D* one step further, immersing you deep into a fantasy three-dimensional world. You, the high wizard of Thoria, must save the troublesome but useful Nemesis of Kelquest from his suspended animation in magical amber.



WOLFENSTEIN 3D

» Maybe it was the fact that people got to blow away Nazis. Maybe it was the sheer challenge of it all. For whatever reason, *Wolfenstein 3D* pioneered the first-person shooter genre and brought its legendary creator, id Software, worldwide notoriety and numerous awards.



SPEAR OF DESTINY

» Hitler believes himself to be invincible with the power of the Spear. Your mission is to infiltrate the heavily guarded Castle Wolfenstein and recapture the Spear from him. The loss of his most coveted weapon could push him over the edge. It could also get you ripped to pieces.



RETURN TO CASTLE WOLFENSTEIN

» Taking on the Nazis and Himmler at the height of World War II, *Return To Castle Wolfenstein* showed id at its absolute zenith. History and the supernatural comes alive while delivering the highest body count since *Doom*. An absolute masterpiece.







DOOM

» A monster hit in its day, this is where id Software proved that it wasn't a one-trick pony. Welcome to hell. Sprint through the labyrinthine levels, firing faster than the oncoming hordes, and try to survive. Twitch gameplay at its very best.





DOOM II

» The hellish hordes have followed you back to earth and the ante is raised tenfold. This time the levels are more challenging, the monsters stronger and the weapons quicker – with the addition of a double-barrelled shotgun. *Doom* with an IQ.





ULTIMATE DOOM

» A remix of the original *Doom* but with an extra episode to really challenge you with nine expert levels. This is beyond tough in places and can frazzle your brain as you try to think while knee-deep in carnage. Only proper gamers need apply.





QUAKE

» The game that changed an industry, selling as strongly today as at launch. Everybody should play through this at least once. High-octane gaming in a devilishly Gothic setting and a thunderous soundtrack from Nine Inch Nails' Trent Reznor. Play it now.



QUAKE II

» The thinking man's FPS. Carmack took the genre a stage further, and the improved monster characterisation of the Strogg are still with us today. A mixed reception saw many gamers overlook the offline mode while others sold their grandmothers to update their computers. Very good.



QUAKE 3 ARENA

» As good as gaming is ever likely to get in terms of competition, community and entertainment. Still regarded as a benchmark even by today's standards, this truly is videogaming as sport, where hard work shows on the score boards. An absolute classic.



DOOM 3

» Carmack takes id into survival-horror territory. With incredible graphics and a co-op mode that allows two players to be terrified together, *Doom 3* will scare you. Remember the first time you saw the dog jump through the window in *Resident Evil*? Think that every five minutes. Unhinging.



QUAKE 4

» *Quake* done to the max. Developed by Raven Software using the Doom 3 engine. A very solid if very straight shooter, there is nothing wrong with it. However, it just lacks the verve of earlier titles, and has a disappointing array of multiplayer maps. Update soon please, id.

HEXEN

» *Quake* finds its way into a *Dungeons & Dragons* environment, packed full of dragon riders and inspired monsters. The addition of magic and flying raised the bar completely. Unfortunately it was severely let down by some less-than-inspired level design.



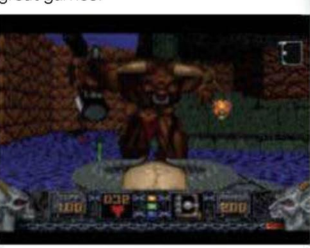
HEXEN 2

» Think *World Of Warcraft* with high-powered weapons, Necromancers and the Four Horsemen of the Apocalypse – all have a part to play as you journey through four demon-infested worlds. The most epic of all id's games and deserving of anyone's time, why did this get missed?

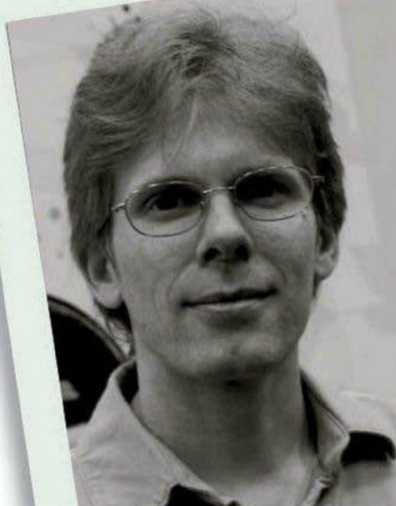
HERETIC

» *Doom* without the shotgun, level design and music. This is what *Doom* would have been if id Software had got it wrong. It's still worth a look as the game isn't a total loss – it just pales when compared with the company's other great games.





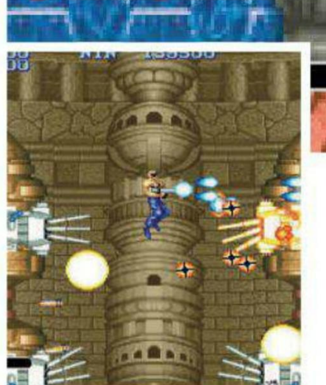

ID'S JOHN CARMACK, THE LAST SURVIVING MEMBER




Excerpts courtesy of Masters of Doom, Planet Romero and 3D Realms

FORGOTTEN WORLDS

FORGOTTEN WORLDS HAS BEEN PORTED TO PRETTY MUCH EVERY EARLY SYSTEM GOING, AND FOR GOOD REASON – IT'S AWESOME. IF YOU HAVEN'T PLAYED IT THEN WE'RE GOING TO ASSUME THAT YOU'VE BEEN IN A COMA



» Modern videogame heroes have it easy – bouncing around, jumping over this, throwing that , and they're given names!

Forgotten Worlds is draped in ambiguity. Seriously, we don't get names for our heroes, other than 'unknown soldiers'. Hell, we don't even get a solid plot per se – as far as we can work out, it has something to do with flying male models, dressed like game-show contestants, fighting in Egypt (circa 3008).

Throughout the game, our ears are continually pricked by the type of dialogue usually spat from the mouths of people with no real understanding of how to communicate. Such examples include this peculiar opening gambit: "Did you find the guy?", immediately followed by "I'll finish you today for sure." And our personal favourite, "I'll burn him with my aura".

But regardless, as we said, the game is awesome and well deserving of your time. Playing the role of two flying mercenaries, it's your job to battle through some intense side-scrolling shmup action. The game can best be described as a punctured *Space Harrier*, and our two protagonists certainly adhere to this thinking. Both hover about the air, accompanied by a trusty satellite dish/shield *R-Type*-type thingy, firing cannons at a variety of imaginative targets – some of which even include those familiar-looking *Space Harrier* dragons built from spheres, although in *FW* they're circles.

It's often cited that *Forgotten Worlds* is the third game of an unofficial Capcom *'Jetpac* trilogy' made up of *Section Z* and the rather brilliant *Side Arms*, and although their narratives don't follow on from each other, when you play them it's easy to see how a connection could be made – keep an eye out for the Capcom Cow!



» Why ever did being 20 foot tall, wearing loincloths, having a Schwarzenegger-style body and a head consisting of balls of fire go out of fashion?!



TIMELINE



ROBOTRON: 2084
Version Featured: Arcade
Year Released: 1982

SECTION Z
Version Featured: Arcade
Year Released: 1985



SIDE ARMS HYPER DYNE
Version Featured: Arcade
Year Released: 1986



MIDNIGHT RESISTANCE
Version Featured: Arcade
Year Released: 1989



SMASH TV
Version Featured: Arcade
Year Released: 1990



ECO FIGHTERS
Version Featured: Arcade
Year Released: 1994



ASSAULT HEROES 2
Version Featured: 360 (Xbox Live Arcade)
Year Released: 2008



THE CONVERSIONS

1. MEGA DRIVE
The most notable thing about this port is the re-drawn visuals and the lovely silky smooth gameplay – even with two players and tons going on, there's little slowdown. With the Mega Drive port, you begin the game with the satellite, alter its speed and wuss out with an excellent autofire mode.

2. CPC
The CPC port looks really colourful, although it does lack any environment detailing. But check out the intricacy on the shops! (Nice try – Ed.) Sadly, the gameplay feels a tad staccato and your gun fires one bullet every two seconds, making it a bit of a struggle to get on with.

3. SPECCY
Not a bad port at all, it has a lot more similarities with the arcade than meets the eye. Ignoring the lack of colour, the sprites are brilliantly drawn, the game itself feels fluid enough and the game follows the layout of the arcade game pretty well. Also, the game is charitable with the Zennies, with price cuts in the shop!

4. C64
The best port among the micros in terms of faithfulness to the look, here we're getting the usual blocky sprites and some fine and impressively staunch detail in the backgrounds. The gun fires more rapidly, the action moves fluidly and we're even blessed with the arcade cut-scenes.

5. AMIGA
Static screenshots show a promising arcade conversion that makes use of the Amiga's extra muscle. The reality is cumbersome controls, cumbersome gameplay and some shocking loading times. A wasted effort that somehow managed to receive a 97% in *Zzap!64*.

6. MASTER SYSTEM
With the livery of the CPC version and the smoothness of the C64 port, this is probably the best 8-bit version you can come by. Lovely looking and boasting its bigger brother's shield and autofiring options, the Sega Master System can boast another solid arcade conversion.

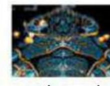
Where the real tender meat in *Forgotten Worlds* can be sampled is fourfold. First of all, it boasts chunky and bold graphics, largely thanks to it running from Capcom's Play System arcade board – the first game to do so – its 360-degree controls that allowed you to pump bullets all around you, its pace, seeing waves of enemies on the screen teleporting, shifting and firing, especially towards the end stages, and no slowdown. And finally, there's the huge number of imaginative enemies and gargantuan bosses that make you want to keep pushing pennies into it just out of sheer intrigue.

However, the game provides a pretty tough time for everyone involved. And ironically, its Xbox 360 controls can actually make things a little bit more frenzied than they perhaps needed to be. It's often best to play *Forgotten Worlds* as you would a conventional blaster a lot of the time, keeping your gun poised forwards and ignoring those enemies that drop behind you. It's advised to keep the circular spraying reserved for bosses and those rare moments when your eyes feel truly capable of pairing off, yet still working in unison.

Forgotten Worlds' popularity saw it appear on many home platforms, such as the six in the Conversions box above – the most iconic being the reprogrammed Mega Drive port, which might not have managed to fully capture the glossy, tactile look of the arcade version, but like the Mega Drive's *Ghouls 'N Ghosts* – yet another reprogrammed Capcom arcade conversion – *Forgotten Worlds* would certainly come to do Sega Mega Drive owners proud.

Deftly, Sega ensured that the all-important co-op function was wholesaled over and the brilliance, as a result of the game's compulsive co-op draw, was faithfully replicated. This is one game that won't be forgotten by those who have played it.

THINGS TO LOOK OUT FOR



BOSSES
Forgotten Worlds has some truly jaw-dropping end-of-level bosses. The most impressive being this chap: a giant blue demigod dressed like a samurai.



SOUNDTRACK
Listen out for *Forgotten Worlds*' organic-feeling soundtrack, it seems to seamlessly change to suit the action on screen (well, we think so anyway).



IFFY CUT-SCENES
There's a ton of between-stage, giant boorish-looking close-up single-shot cut scenes with stupid text at the bottom. Above is one example.

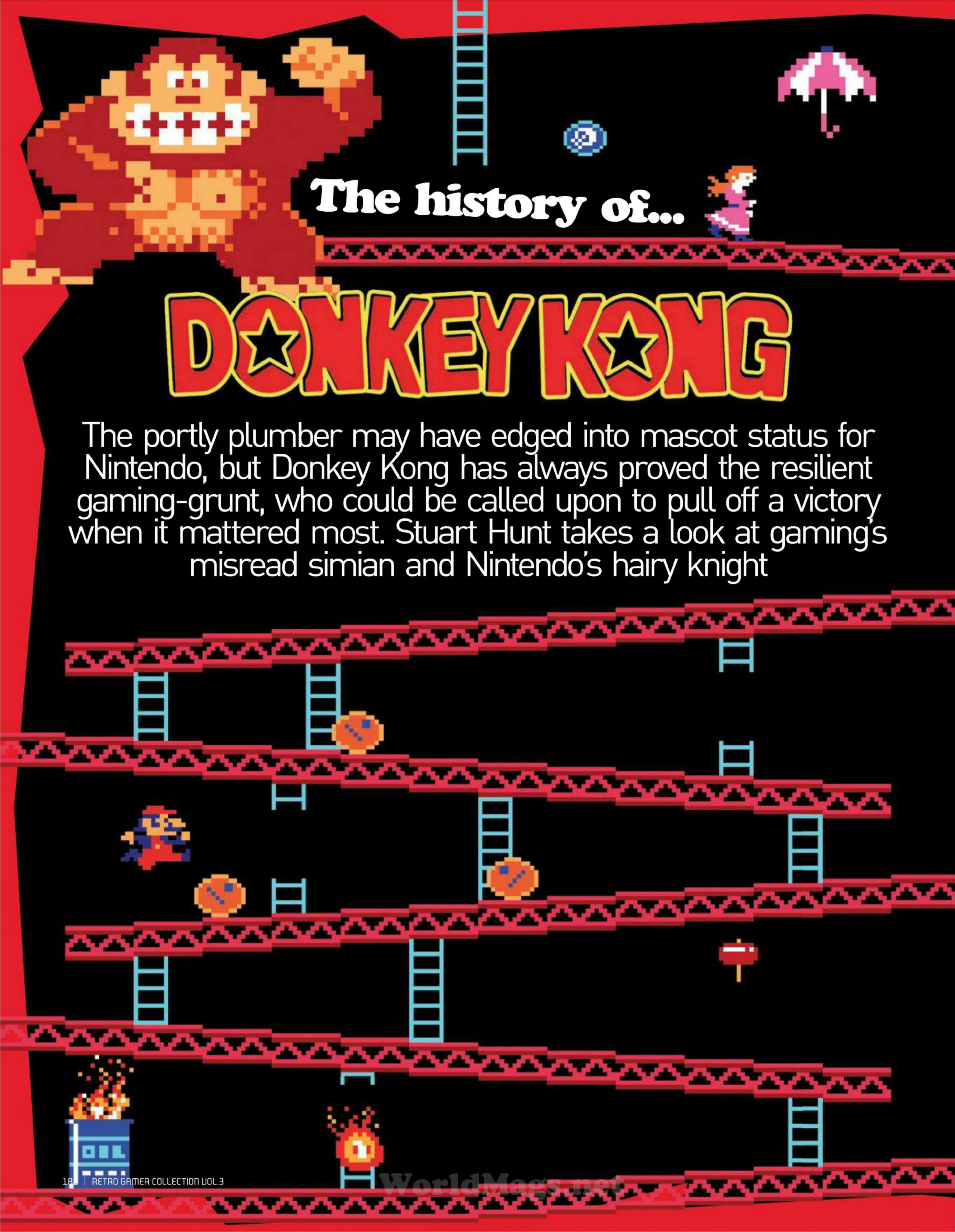


SHOPS
Keep an eye out for these handy newsstands. Inside, you can exchange Zennies to upgrade weapons, armour and buy a newspaper with a boss hint in it.

TRY THIS NEXT

OMEGA 5
It's clear that *Forgotten Worlds* was a huge influence on Hudson's sublime Xbox Live shooter, *Omega 5*. At a mere 800 points (about £6), you're getting one of the best blasters on the machine. This time out, though, there are double the number of characters, plenty of unlockables – including a one-hit-kill mode – and loads of dazzling fire power and varied enemies. Sadly, with only four levels to work through, the game is for score chasers only so it will draw you back. Stunning looking, *Omega 5* is a must-download for any *Forgotten Worlds* fan.





The history of... Donkey Kong

The portly plumber may have edged into mascot status for Nintendo, but Donkey Kong has always proved the resilient gaming-grunt, who could be called upon to pull off a victory when it mattered most. Stuart Hunt takes a look at gaming's misread simian and Nintendo's hairy knight

Donkey Kong A-Z



Remember that entire series of *Dallas* that was controversially wiped away when the show's producers brought Bobby Ewing back to life? They explained his lack of rigor mortis was due to a long, drawn-out dream sequence by his hyper-imaginative wife. Consequently, all story, plot threads and character development that had stemmed from his untimely death were made redundant, and its viewers were left understandably miffed by the revelation.

Okay, we digress, but like the *Dallas* scriptwriters, Nintendo has also been known to skip over the facts and move the goalposts on the odd occasion. It certainly feels like there's a pivotal link missing from its IP lineage, a lost game that never found a release; one that chronicled Mario's transition from an evil carpenter to a heroic plumber and explaining how Donkey Kong went from being a villainous ape to a loveable 20-foot beanie baby.

As confusing as this story eventually became, looking to the early days of *Donkey Kong*'s development for an anchor, instead tosses you an early arcade cab called *Radar Scope*. It was this very early *Space Invaders* clone that would trigger *Donkey Kong*'s genesis.

The Eighties shooter from Nintendo proved a big hit in its Eastern homeland and as a result the then-president of Nintendo of America, Minoru Arakawa, happily agreed to place a considerable order for the machine to be distributed in America. As fate would have it, by the time *Radar Scope* touched down on American soil the buzz surrounding the game had waned considerably. US arcade operators were furious by the lack of earnings from the machine and aimed their anger towards Arakawa.

Facing financial ruin, Arakawa pleaded with his father-in-law, Nintendo CEO Hiroshi Yamauchi, to send him a new game that he could install into the *Radar Scope* cabinets and turn his ill fortune around. Yamauchi agreed and entrusted the job to a young aspiring industrial designer who was working for him named Shigeru Miyamoto.

"When I started my career at Nintendo, there was no such thing as videogame making at the company," recalls Miyamoto. "When I joined the company, I only wanted to be involved in making toys or entertainment products. Soon afterwards I came across videogames. But at the time, the company didn't make or sell them. My job was to draw pictures. I specialised



Donkey Kong doesn't really do a whole lot on the 'Elevator' screen, he just stands there looking confused while the spring does most of the work.

A is for Ape: Despite sharing half a moniker with a stubborn horse, the gorilla was the animal selected by Miyamoto to play the villain in his first videogame.

B is for Barrels: Rather than simply swinging down and eating Jumpman, Kong throws an infinite number of large barrels at his abusive master.

C is for Coleco: Coleco won the licensing rights to take *Donkey Kong* home.

D is for Diddy Kong: Donkey Kong's little cousin made his first appearance in *Donkey Kong Country*, and then rescued his hind in *Donkey Kong 2*.

E is for Everyman: This is the term coined for heroes like Jumpman, a generic guy that anyone who's ever tried to rescue their girlfriend from a giant ape could easily relate to.

F is for a Fistful Of Quarters: The documentary that follows two contesting *Donkey Kong* champs on a cross-country duel to see who is the real 'King of Kong.'

G is for Gunpei Yokoi: The notable Nintendo engineer was instrumental in bringing the big guy to life.

H is for 'How High Can You Try?': The grammar-dismissing message that appears in the arcade game. It was later switched to the rather dubious sounding 'How High Can You Get?'

I is for Imitations: One of the most replicated games ever, *Donkey Kong* fever created a wave of clones and giant-ape-related bandwagon jumping.

J is for Jumpman: Yes, we know it's Mario, but like all good messiahs, he was originally a carpenter with very distinctive facial hair.

K is for Kill Screen: Upon reaching Level 22, the game's timer goes loopy – adding seconds, removing seconds, freezing seconds and then, eventually, killing you.

L is for Ladders: Without them *Donkey Kong* would be a rather short and uninteresting game.

M is for Mario Segali: Apparently the butter ball can thank a Nintendo landlord for his infamous moniker.

N is for Nintendo: Started out selling playing cards, then electronic toys, and then arcade games about big apes and carpenters.

O is for Orco the Killer Whale: Appears in *Donkey Kong Jungle Beat* and is the whale pal of Donkey Kong. She helps him uncover secrets in the game by smashing into walls.

P is for Pauline: Jumpman's girlfriend and Donkey Kong's hostage, Pauline's original name was Lady, but it was later changed because it was deemed too obvious.

Q is for Q*Bert: Warren Davis's ball of nostrils teamed up with Donkey Kong for the animated show *Saturday Supercade*.

R is for Radar Scope: From the guts of this *Galaxian*/*Space Invaders* clone came the birth of *Donkey Kong*.

S is for Shigeru Miyamoto: The prolific game designer cut his teeth on *Donkey Kong* – a project that he based around the characters in the *Popeye* cartoons.

T is for Taj: Taj is the Arabian-looking elephant that aids Diddy Kong in his quest to thwart the evil Wizpig in *Diddy Kong Racing*.

U is for Universal Studios, Inc versus Nintendo Co, Ltd: MCA Universal took Nintendo to court over *Donkey Kong*'s passing resemblance to *King Kong*. Universal lost.

V is for Very Addictive: The game's simple gameplay made it immediately accessible and extremely hard to walk away from.

W is for Wrinkly Kong. The late wife of the original Donkey Kong, sadly passed away soon after *Donkey Kong Country 3*.

X is for X-Rated Action: After Mario rescues his beloved Pauline, they engage in some soppy giant-heart action.

Y is for Yamauchi: Yamauchi was the CEO of Nintendo at the time of *Donkey Kong*'s genesis. If it wasn't for him entrusting Miyamoto with the project, the industry might have looked somewhat different today.

Z is for Zelda: Thanks to the money raised by *Donkey Kong*, Nintendo went on to create the

Donkey Kong Rap

THE BEGINNING OF DONKEY KONG 64 OPENS WITH THE INFAMOUS DONKEY KONG RAP. IT BASICALLY INTRODUCES THE MAIN CHARACTERS OF THE GAME, SHOWS OFF THEIR SPECIAL ABILITIES AND MAKES FOR SOME SIDE-SPLITTING HILARITY. HERE'S A COMPLETE WALKTHROUGH OF THE WHOLE SONG, WITH LYRICS… SHOULD YOU FEEL THE URGE TO SING ALONG…

"Here, here, here we go,
So they're finally here performing for you,
If you know the words you can join in too,
Put your hands together if you want to clap,
As we take you through this monkey rap,

Huh!!
DK, Donkey Kong!!

He's the leader of the bunch, you know him well,
He's finally back, to kick some tail,
His coconut gun can fire in spurts,
If he shoots ya, it's gonna hurt,
He's bigger, faster and stronger, too,
He's the first member of the DK crew!"







Donkey Kong/Cranky Kong
FIRST APPEARANCE: DONKEY KONG
The original Donkey Kong flits between villain and hero throughout the early series, and then became an eccentric geriatric for *Donkey Kong Country*. Opening and closing the rap is Cranky. He might look like he's about to keel over and die at any second, but if his scratching skills are anything to go by, this ape still has plenty of Parma Violets left in him.







"**Huh!!**
DK, Donkey Kong!!
DK, Donkey Kong is here!!

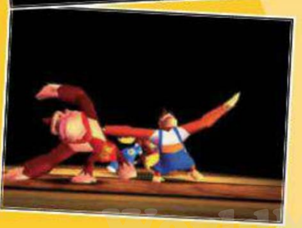
This Kong's got style so listen up, dudes,
She can shrink in size to suit her mood,
She's quick and nimble when she needs to be,
She can float through the air and climb up trees,
If you choose her, you'll not choose wrong,
With a skip and a hop, she's one cool Kong!"



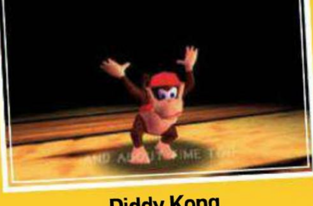




Chunky Kong
FIRST APPEARANCE: DONKEY KONG 64
Chunky's the older brother of Kiddy and cousin of Dixie and Tiny. As his name implies, he's no string bean. But despite his menacing frame, he's a bit of a wimp at heart; he hates heights, but who doesn't? After staring confusingly into the camera for a few seconds, he shrinks and expands his body in size.







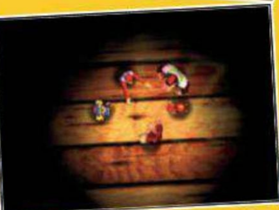
Diddy Kong
FIRST APPEARANCE: DONKEY KONG COUNTRY
Donkey Kong's nephew becomes his keen, dependable sidekick in *Donkey Kong Country*. He wears a red Nintendo cap and shows his face in *Super Smash Bros Brawl* on the Wii. After shooting up in the air with the aid of a precarious-looking wooden jetpack, he pulls out a colourful axe and proceeds to rock out.



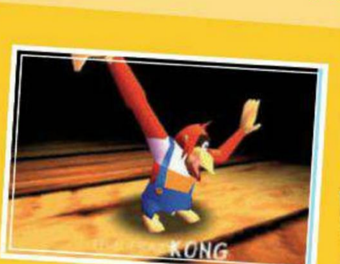


"**Huh!!**
DK, Donkey Kong!!

He has no style, he has no grace,
This Kong has a funny face,
He can handstand when he needs to,
And stretch his arms out just for you,
Inflate himself just like a balloon,
This crazy Kong just digs this tune!"







Lanky Kong
FIRST APPEARANCE: DONKEY KONG 64
Everyone has an odd-looking relative who's loosely related to them in some way but no one can ever remember how, and *Donkey Kong* is no different. Lanky Kong was heroically freed by Donkey Kong in *Donkey Kong 64*. In the rap, Lanky contorts his face into weird shapes and sizes before letting out a monumental display of flatulence. He consequently darts around the screen like a loon.



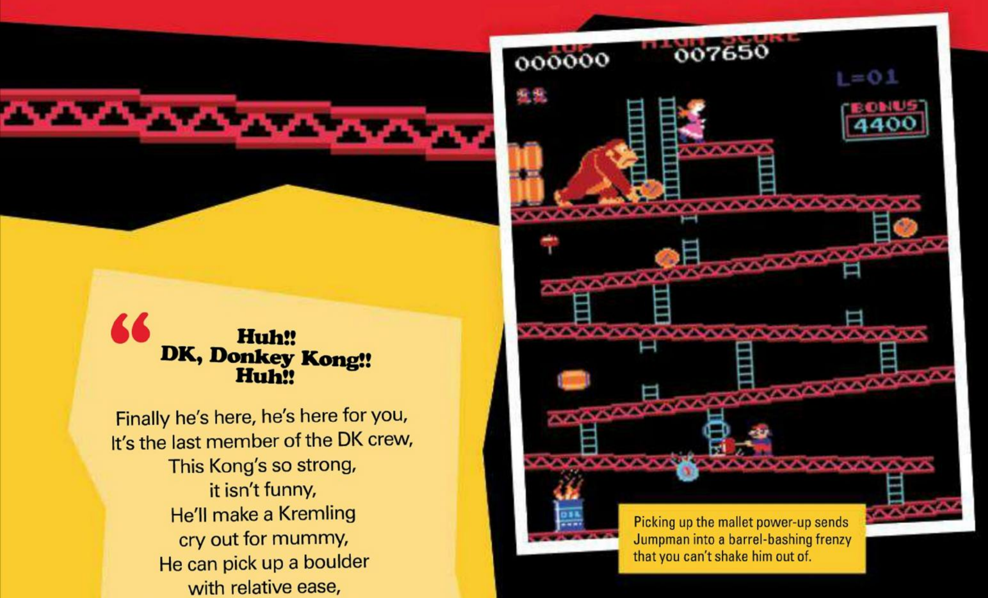


"**Huh!!**
DK, Donkey Kong!!
DK, Donkey Kong is here!!

He's back again and about time, too,
And this time he's in the mood,
He can fly real high with his jetpack on,
With his pistols out
he's one tough Kong,
He'll make you smile
when he plays his tune,
But Kremlings beware
'cause he's after you!"





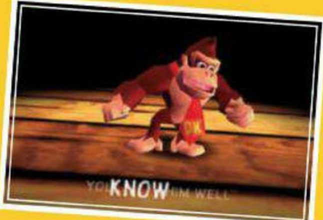


Picking up the mallet power-up sends Jumpman into a barrel-bashing frenzy that you can't shake him out of.



The *Donkey Kong* cut-scene, in all its ladder-climbing gorilla glory.

> **Huh!!**
> **DK, Donkey Kong!!**
> **Huh!!**
>
> Finally he's here, he's here for you,
> It's the last member of the DK crew,
> This Kong's so strong,
> it isn't funny,
> He'll make a Kremling
> cry out for mummy,
> He can pick up a boulder
> with relative ease,
> Makes crushing rocks seem
> such a breeze,
> He may move slow,
> he can't jump high,
> But this Kong is one heck of a guy!



Donkey Kong The 2nd
FIRST APPEARANCE: DONKEY KONG COUNTRY
The 16-bit generation marked the arrival of a new Donkey Kong, sporting a dapper tie and posh new haircut. He's the grandson of Cranky Kong, and uncle to Diddy. He kicks off his part of the rap by doing some stretches, flexing his muscles and shooting some bees.



> **Huh!!**
>
> **C'mon Cranky take it to the fridge!**
>
> Walnuts, peanuts, pineapple smells,
> Grapes, melons, oranges
> and coconut shells,
> Walnuts, peanuts, pineapple smells,
> Grapes, melons, oranges
> and coconut shells,
>
> **Oh yeah!!**



Tiny Kong
FIRST APPEARANCE: DONKEY KONG 64
Dixie's sister made her first appearance in *Donkey Kong 64*. She's the tail-less sister to Dixie, and cousin to Chunky and Kiddy Kong. She wears a beanie hat, sweat pants, and Pat Butcher-style earrings. For Tiny's chorus she punches a giant croc in the face and then runs around some palm trees.

in industrial design, so I was primarily drawing things to do with videogames or creating boxes for them."

Rather than update *Radar Scope*, Miyamoto set to work on designing a completely new game based around the machine's hardware. This proved a pivotal move that would ultimately trigger Nintendo's prominence in the US arcade market.

At the time, most arcade games required you to shoot at, or avoid, chirping sprites that disappeared faster than they had materialised. Taking inspiration from popular culture, Miyamoto decided that he would cling to the endearing love-triangle formula, used in the *Popeye* cartoons, to produce an arcade game that would emit character and playability. He set about designing characters to play three roles that he felt gamers would easily relate to: the hero (Jumpman), the damsel (Lady), and the bully (Donkey Kong).

Miyamoto's vision for Jumpman was an everyman-type character, a Joe Shmoe, someone the average gamer could relate to. Lady was a typical femme fatale, in the mould of a smouldering screen siren and Donkey Kong was the burly, misunderstood villain of the piece.

While many consider Donkey Kong the monster of the tale, in a subtle nod to the classic *King Kong* story, Miyamoto's premise for the game isn't as black and white as it might first seem. The tale of how Jumpman finds himself coming to the rescue of Lady is one that will shatter the friendly façade of the world's most prolific plumber. Fed up of his maltreatment at the hands of his carpenter master, Donkey Kong breaks free from his cage and, as retribution, he kidnaps Jumpman's girlfriend.

With this 'damsel in distress' scenario in his head, Miyamoto approached legendary Nintendo technician Gunpei Yokoi with his idea. And with Miyamoto pencilling the concepts and Yokoi supervising the technical aspects of the project, together they brought the scenario to fruition.

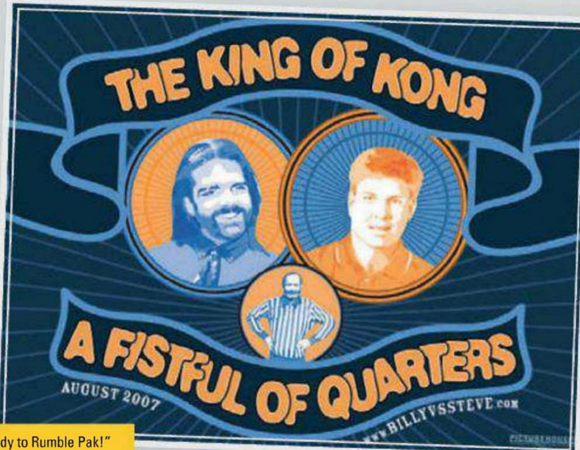
Miyamoto's fertile nature easily surpassed the technical confines of the time. His idea to make the characters react in different ways and to incorporate seesaws into the action were concepts that, sadly, had to remain inside his sketchbook. While these limitations kept tabs on his creativity, ironically, they became a huge factor in shaping the appearance of Jumpman, who later went on to become the world's most legendary videogame icon: Mario. In an interview with Talk Asia, Shigeru Miyamoto revealed how he settled on the iconic look of Mario.

"We had to draw Mario as a small character, and at the same time we had to make him look human," he explains. "To achieve that, we needed to draw distinctive features for him, such as giving him a big nose. We gave him a moustache so that we didn't need to draw a mouth, as it is often difficult to show facial expressions with small characters. We also gave him big hands. First we created Mario with dots and put together these distinctive features. Then I finished with another drawing, just to show the final image of the character. I didn't have any special theory

HOLLYWOOD KONGA

KONG SMASHES INTO CINEMAS… AGAIN

Mario may have starred in his own Hollywood movie, and treated us to an hour-and-a-half long *Mario 3* advert in the form of Fred Savage flick *The Wizard*, but *Donkey Kong* was cast to take centre stage in Seth Gordon's movie: *The King Of Kong: A Fistful Of Quarters*. After losing his job, Steve Wiebe set about topping the *Donkey Kong* high-score record set by Floridian Billy Mitchell. After refining his barrel leaping and rivet removing, Steve eventually bettered Billy's score and became a local hero in his hometown. The film chronicled the pair's enmity, which came to a nail-biting conclusion in a final cross-country duel.



"Let's get ready to Rumble Pak!"

The history of... DONKEY KONG

behind the making of Mario. He evolved over the development process."

There are several theories as to how Miyamoto came to eventually settle on the name *Donkey Kong*. It's often cited that the original title was actually supposed to be '*Monkey Kong*,' but thanks to an over-zealous ink toner, causing a blurry fax to be sent by Nintendo, the 'M' was accidentally switched to a 'D'. But the real truth is that *Donkey Kong*'s name came down to one man: Shigeru Miyamoto, who confesses that he wanted to make his gorilla sound as stubborn and as stupid as possible. And so when thinking about animals that he deemed were mulish and dim-witted, the donkey popped into his head.

"For *Donkey Kong*, I wanted something to do with 'Kong', a word that gives the idea of apes in Japanese. I came up with *Donkey Kong* because I heard that 'donkey' meant 'stupid'. Unfortunately, when I approached Nintendo of America with the name, nobody liked it. They said that it didn't mean 'Stupid Ape', but we went ahead with that name anyway."

It's widely regarded that *Donkey Kong* was the first game to ever introduce a cut-scene. In a pastiche to the Empire State Building ascent in *King Kong*, Donkey Kong climbs his way up to the top of a construction site, with Lady trapped brutishly under his arm. After perching her aloft the highest platform, he bends the iron girders beneath him by stomping on them, and sets the scene for our hero to make his rescue.

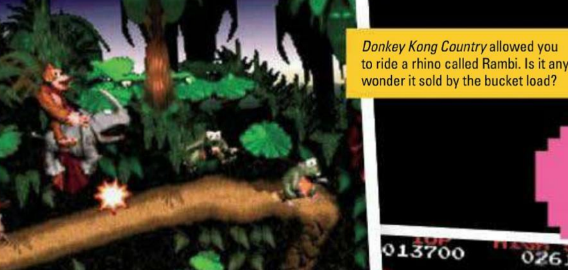
While most remember vividly the game's barrel-leaping level, it was praised for bringing multiple stages into its gameplay. *Donkey Kong* is split into four different sections, with each representing 25m of the total structure that Jumpman has to climb to rescue Lady. While late US versions of the game strangely work through the differing stages randomly, the original followed a logical configuration.

The first stage, commonly referred to as 'Girder', saw Jumpman climb a series of ladders, while avoiding barrels that Kong rolls along the platforms from the top of the screen. The second stage – nicknamed the 'Pie Factory' for its pie-like cement discs – saw Jumpman negotiate a series of conveyor belts, while avoiding deadly fireballs. The game's third stage, 'Elevator', was littered with moving lifts that had to be quickly negotiated before Jumpman became tangled up in their gears. The game's final screen 'Rivets' saw Jumpman knock out eight rivets that support an elevated Donkey Kong. Removing all of the supports caused the structure to collapse and Donkey Kong to fall on his head.

When Kong is toppled the game repeats, looping between the differing four stages and increasing in difficulty until you reach stage 22. It's here you meet its infamous 'kill screen'. A timer-glitch within the game meant it was impossible to progress further than screen 22. When you reach this stage it loads up with 100 seconds on the game's clock, but when Jumpman eventually appears it wildly increases to 4,000 and begins counting down to 3,700, where it freezes and then kills him on the spot.

After seeing the finished game, Arakawa quickly called his son-in-law to tell him that Miyamoto had delivered him a title that he felt could eclipse the popularity of the *Radar Scope*. Nintendo's US distributors initially greeted *Donkey Kong*'s arrival to America with pessimism. They had their reservations regarding its unique gameplay and peculiar moniker, but Arakawa sternly disagreed and went ahead with translating the game's story and renaming the characters for its Western cabinet artwork. Arakawa eventually settled on Pauline for Lady – named after the wife of a Nintendo warehouseman, and Mario for Jumpman, after Mario Segali, the landlord of Nintendo of America's headquarters.

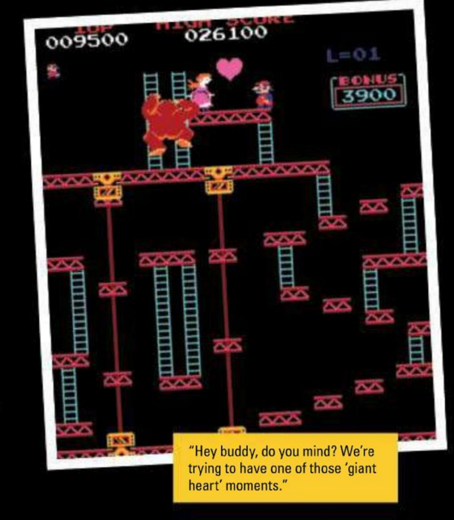
To test the water, two *Donkey Kong* machines were set up inside a Seattle bar, and its irresistible gameplay soon amassed quarters and fans in their droves. Officially released in July 1981, demand for the machine spiralled in a month. Within a year Nintendo had sold 60,000 units, earning it a confounding $180 million. In its second year it raked in a further $100 million and the game had become a national phenomenon.



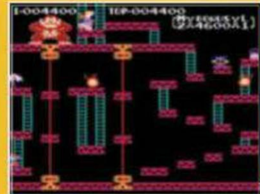
Donkey Kong Country allowed you to ride a rhino called Rambi. Is it any wonder it sold by the bucket load?

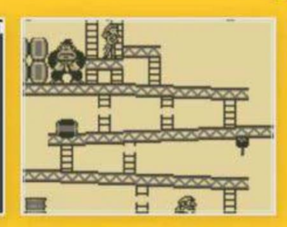


The 'Rivets' stage is the final screen and sees Donkey Kong fall to his death – well, sort of.



"Hey buddy, do you mind? We're trying to have one of those 'giant heart' moments."

NOTABLE KONGVERSIONS OF DONKEY KONG

ATARI 2600
Oh dear, it only has two of the four stages from the arcade game, and if you think those levels were omitted to help make the game look good, you'd be wrong. Mario looks pretty faithful, sporting moustache, flat cap and even sideburns. Donkey Kong, however, looks like Zippy from *Rainbow*. The game never ends, either, it just keeps repeating its two screens until your Atari melts or you simply run out of lives.

NES
This NES classic was so popular that the cart remained in production for five years! Unfortunately, it wouldn't be an early *Donkey Kong* port without dropping stages from the arcade game, and the NES doesn't disappoint. Omitting the 'Pie Factory' level because of storage and having slightly different sounds from the original, it might fail to offer the complete package, but it comes pretty darn close.

COLECOVISION
This fine home port came packed with the ColecoVision, so it could be considered one of the earliest examples of a killer app. It offers a pretty faithful port of the arcade, but still boasts only three of the four stages – yep, no 'Pie Factory'. And despite an excessive use of the colour pink and the fact that Pauline is almost the same height as Donkey Kong, it looked and sounded remarkably faithful to the original.

INTELLIVISION
This port is marginally better than the Atari one. The first thing you notice is that Donkey Kong is green and Mario looks like Q*Bert. The game is hard to play, with Mario's jump only just clearing the enemies. Apparently, it looked so bad that when Mattel viewed it, it thought Coleco was intentionally trying to sabotage its machine. Coleco probably showed Mattel the ugly Atari port afterwards to soften the blow.

GAME BOY
More of a re-invention than a straight port, this *Donkey Kong* debut for the Game Boy was a strange Frankenstein of *Super Mario Bros* and the original *Donkey Kong* arcade game. The first four levels followed the order of the arcade game, but after Kong hits the ground with a thud, he re-awakens, grabs Pauline and escapes, leaving Mario to chase him through nine worlds of *Super Mario*-style platforming action.

By the end of 1982 Donkey Kong's hairy face could be seen on board games, cereal boxes and even in his own cartoon. With Donkey Kong becoming such a profitable icon, it was inevitable that the rights to release a home-conversion would be hotly contested. Taito, Atari and Coleco would lock horns in a bitter battle to secure the console rights to the game, and it was Coleco who eventually emerged the victor. Yamauchi granted Coleco complete exclusivity to the home and table-top conversion of the franchise, and in return Nintendo received an undisclosed sum and a share in all cartridge sales. The contract was signed on 1 February 1982, and work on porting the arcade smash began in earnest.

Within four months, Coleco's home conversion was complete. It had stayed remarkably faithful to the original arcade game. Rather than release the game as a standalone cart, Coleco bundled the game with its ColecoVision console. It would later create versions of the game for Atari's 2600 and Mattel's Intellivision, in deals that saw its sales figures skyrocket.

However, the air soon turned sour. Coleco, Nintendo and *Donkey Kong* were threatened by court action by Universal Studios, who proclaimed that the character of Donkey Kong was a blatant forgery of its stop-motion classic *King Kong*. Coleco settled with Universal out of court, but Nintendo was adamant that no infringement existed and went on to fight the case.

A catty battle ensued, but the case eventually fell through. It was discovered that Universal had successfully won a previous court battle to establish that *King Kong* was within the public domain, and so, could be used for the company's movie. The judge ruled in favour of Nintendo, and after an appeal, which was later quashed, Universal was forced to pay $1.8 million in damages to the videogame giant. It was the perfect result for Nintendo, but unfortunately Universal had already earned millions of dollars from the sale of Coleco's *Donkey Kong* carts. Coleco later reclaimed some of that money by counter-suing Universal.

As a gesture of gratitude, Nintendo presented its lawyer, John Kirby, with his own sailboat, which had been jokingly named the Donkey Kong. The company also gave him the exclusive worldwide rights to use the Donkey Kong moniker to manufacture a range of Donkey Kong sailboats. It has also been claimed that the character of Kirby was named after John Kirby, in honour of him winning the case.

With the popularity of *Donkey Kong* hitting its stride, Miyamoto quickly got to work on an arcade sequel. Probably as a result of *Donkey Kong*'s unprecedented popularity, for his second instalment, *Donkey Kong Jr*, he muddied up the three central roles. He made Donkey Kong the 'damsel in distress', Mario the eponymous villain and the role of hero fell to the knuckles of Donkey Kong's son, Junior.

Retaining the simple platform formula, it found Junior swinging from vines, avoiding bear traps with piranha qualities and collecting fruit across four varying stages that would loop and increase in difficulty. Mimicking the original, each stage was completed by reaching the top of the screen where Mario had Donkey Kong chained in shackles. While the game proved a popular sequel, it failed to repeat the same level of success that *Donkey Kong* had achieved the previous year.

OFF THE BEATEN TRACK

Kameo Appearances

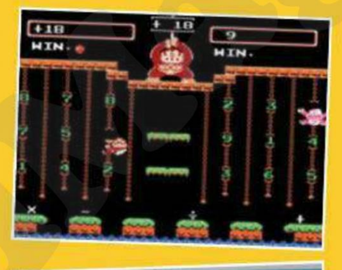
WE TAKE A LOOK AT SOME OF THE FINEST CAMEOS AND PECULIAR TITLES THAT DONKEY KONG HAS PUT HIS NAME TO...



MARIO PARTY
Released: 1998
System: N64
The Nintendo squad play animated pieces in an interactive board game. *Mario Party* spawned eight sequels, seven of which managed to somehow stretch over two consoles. The aim was to obtain as many gold stars as possible by winning in the various mini-games that were dished up. Unlike *Mario Kart*, the characters didn't really differ in attributes, so as far as cameos go, this series was an easy one for Donkey Kong – he just had to turn up and look ape-like.



DONKEY KONG 3
Released: 1986
Systems: Arcade, NES, GBA, PC-88
This strange platform/shooter puts Donkey Kong back into the role of the villainous ape and you inside the pants of Stanley the Bugman. Using a can of Raid, you had to help Stanley protect his flowers by spraying angry bees in the face. Donkey Kong would occasionally drop projectiles at you from the top of the screen, and when you found a spare second, you had to hop onto the higher platforms and repel him with a quick, sharp spray to progress on to the next stage.



DONKEY KONG JR MATH
Released: 1983
Systems: NES, Virtual Console
Donkey Kong would hold up a number and you would climb up vines to collect numbers and operators to make an equation that could equal that number. If you managed to get the equation correct, you were awarded an apple (shouldn't that have been a banana?). It's certainly a novel way of helping children improve their maths skills, but unfortunately, as with anything you attach the word 'math' to, it soon becomes as enjoyable as circling the full stops in a newspaper with an empty pen.



DONKEY KONG HOCKEY
Released: 1984
Systems: LCD
This one has to get a mention. It tops *Donkey Kong Jr Math* for sheer randomness. It's an early portable game released by Nintendo that saw Mario and Donkey Kong take to the ice and fight on opposing hockey teams. This peculiar portable came packed with two circular control pads that stemmed out from its sides. It allowed for some exciting, if somewhat cramped, two-player LCD hockey action. Many thanks to Steven Read from Miniarcade.com for helping us with the image.



DONKEY KONGA
Released: 2003
Systems: GameCube
Developed by the team responsible for the popular *Taiko Drum Master* games on the PS2, this rhythm-action title had you matching the beats on screen using a set of bongos. Its success generated two sequels, the second of which, *Donkey Konga 3*, was only released in Japan. However, the game is worth tracking down for its track listing alone, which is teeming with retro-arcade sounds, including *Metro-Cross* and *Final Lap*.

Miyamoto set to work designing Donkey Kong. A pivotal move that would trigger Nintendo's prominence in the US market

The history of...

DONKEY KONG

Donkey Kong's irresistible gameplay soon amassed quarters and fans in equal measure

KARTOON KAPER



After seeing the floods of quarters that the videogame industry was bringing in, US television giant CBS decided to get in on the action by commissioning *Saturday Supercade*, a cartoon collaboration of popular videogame characters. It pureed Frogger, Pitfall Harry and Q*Bert into generic cartoon capers that saw them solving mysteries, dishing out morals, or, in poor Donkey Kong's case, facing a life of circus imprisonment. Each episode involved a constantly smiling Donkey Kong escaping from Mario and his niece Pauline (yes, that would make her Luigi's daughter), by thinking up 20 head-slapping methods of absconding (one even included using a shark as a jet-ski).

Within two years, *Donkey Kong* had created an influx of bandwagon bootlegs. In response to the game's popularity, Sega published a strange *Donkey Kong* clone called *Congo Bongo*. Developed by audiovisual manufacturer Ikegami Tsushinki, its isometric perspective might have looked poles apart from *Donkey Kong*, but it was undeniably based on Nintendo's concept. *Congo Bongo*'s humorous plot found the protagonist pursuing a giant ape not for wealth, fortune or love, but in revenge for a dangerous 'practical joke' that involved the ape setting fire to his tent while he was sleeping. While the game easily eclipsed *Donkey Kong* in the ridiculous story stakes, it unfortunately couldn't measure up to its commercial success.

While 1983 proved a prolific period for Nintendo and *Donkey Kong*, the same couldn't be said for the US videogame market. The Nintendo Famicom was about to launch in Japan, Miyamoto was about to release another *Donkey Kong* arcade game and the bottom of the videogame market in North America was about to well and truly drop out.

Donkey Kong 3 saw a strange departure from Miyamoto's previous *Donkey Kong* games. There was no Mario, no Pauline, and no simian sibling. Its peculiar plot centred on Donkey Kong's love for greenhouse vandalism. After breaking into Stanley the Bugman's greenhouse, Donkey Kong clings to its rafters and narks off several bees by impolitely punching their hives. The miffed bees fly out and, upon noticing Donkey Kong's large frame, opt to take their anger out on Stanley's prized begonias. Armed with a can of insecticide, you had to help Stanley eradicate the airborne-pests and scare Donkey Kong away before the bees flew to the bottom of the screen and massacred his flowers.

Perhaps, due to its stark change in gameplay, *Donkey Kong 3* failed to mirror the success of its two arcade cohorts, and Nintendo soon turned its attention towards the Famicom. Arcade ports of *Donkey Kong* and *Donkey Kong Jr* made up two of the three launch games for the console. The Famicom also marked the first straight-to-console outing for *Donkey Kong*, in a game that probably had many of the series' fans scratching their heads in bafflement.

Nintendo felt the need to release an 'education series' for its console, and believed that Donkey Kong was the best character to champion its unusual arithmetic tutor, *Donkey Kong Jr Math*. The game is as crazy and as exciting as its title suggests. Reprising the role of Junior, the player must climb up vines and collect numbers and operators to equal the number that Donkey Kong holds up in the air. There were three modes of play in the game, one of which included a two-player option that allowed two friends to battle it out *Countdown*-style to win some digital apples. *Donkey Kong Jr Math* was released in Japan in 1983 and later became a launch game for the Famicom when it was released in the United States two years later.

It was a decade before *Donkey Kong* would escape again. In 1994, Miyamoto released a strange *Super Mario/Donkey Kong* hybrid for the Game Boy. Due to the confusing title of *Donkey Kong*, fans of the original arcade game hoping for a faithful monochrome reproduction were to be disappointed. While the game retained the first four levels from the original outing, a Mario with a super back-flip jump that rendered the ladders useless, and the odd ability to catch barrels using his feet, meant the game was a bit of a pointless episode. It proved a popular title for the handheld, nonetheless, and also marked the first appearance of Donkey Kong's tie, which, from that point, became obligatory for the franchise.

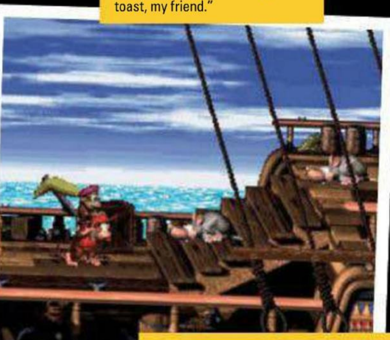
Over time, the Super Nintendo had eventually mirrored the popularity of the NES. Nintendo had gone through a stage of dusting off all its old IPs and giving them a 16-bit make over. *Metroid*, *Mario* and *Zelda* had proved extremely successful titles for the console, but the industry was being dazzled by the visual leap that 32-bit software had taken. The Saturn and PlayStation were wowing the industry with solid, realistic, 3D models that made 2D adventures look dated by comparison. Nintendo needed a strong title to inject interest back into the SNES, and it believed *Donkey Kong* could be the ape to do it.

Nintendo handed the reins to Rare, and Chris Stamper and his group of developers set about transforming the archaic-looking arcade game into one of the most dazzling SNES titles ever. Rare had recently taken a huge financial gamble by purchasing several 3D graphic terminals from Silicon Graphics. These machines allowed them to create beautiful pre-rendered 3D characters capable of inhibiting depth and fluidity. The company named this technology ACM (Advanced Character Modelling), and would unveil this ground-breaking development process with *Donkey Kong Country*. This marked the first time that Miyamoto was not directly involved in a *Donkey Kong* project.

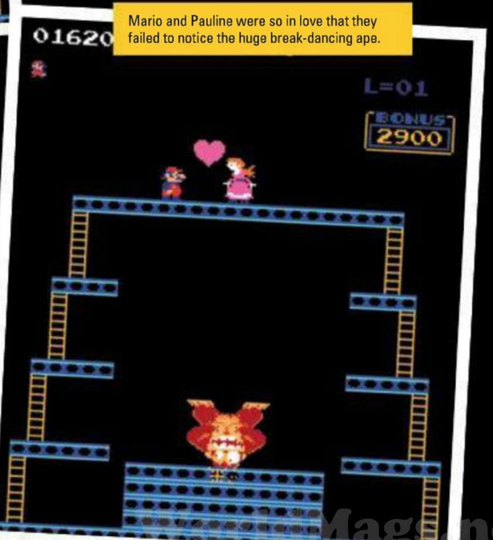
Donkey Kong Country was markedly different in gameplay from previous *Donkey Kong* outings. Sporting

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"I don't know what you're smiling about, one more rivet and you're toast, my friend."



Donkey Kong Country 2 had a swashbuckling theme, and allowed you to throw your buddy into giant rats.

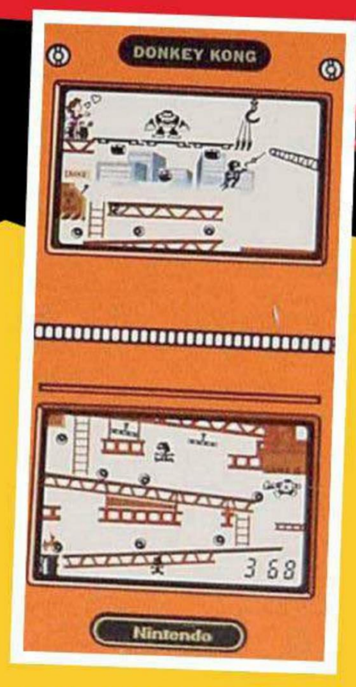


Mario and Pauline were so in love that they failed to notice the huge break-dancing ape.

KRAZY KOPY

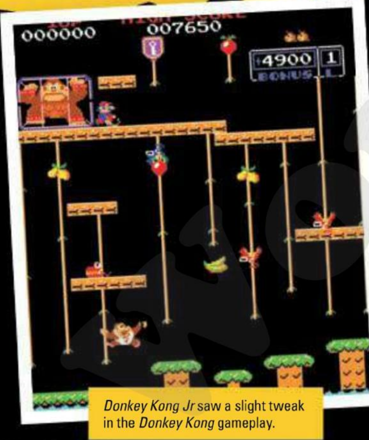


Of the plentiful *Donkey Kong* clones that appeared after its release, *Crazy Kong* is one of the better to have emerged. Developed by Falcon, it was based around the hardware of Nichibutsu's *Crazy Climber* arcade game. Released the same year as *Donkey Kong*, it looks remarkably similar to the Nintendo classic. In fact, it's so alike that Nintendo went on to stop Falcon from releasing the game in the United States. Subsequently, in certain parts of Europe, *Krazy Kong* actually became more popular than *Donkey Kong*. The clearest distinction between the two games is the different order in which the stages appear. Also, Falcon's Kong actually looks capable of foaming at the mouth, ditching the barrels and eating you.



HANDHELD HONOURS

After spotting a bored Japanese businessman amusing himself by pressing the buttons on his calculator (probably trying to spell the word 'boobies'), Gunpei Yokoi had a brainwave. He would drop the boring numbers and replace them with endearing moving graphics. The result was Nintendo's portable LCD Game & Watch series. *Donkey Kong* was one of the earliest games to get a Game & Watch translation. Split over two screens, the action centred solely on the game's 'Girder' stage. This version did incorporate a somewhat dramatic way of toppling poor Kong – Mario had to cut wires that supported the platform Kong was standing on. It also introduced a crane into the mix, which Mario could use to pull himself up with.



Donkey Kong Jr saw a slight tweak in the *Donkey Kong* gameplay.



This is how the US flag would have looked had it incorporated two monkeys hanging from a rope.

a smart red tie and a twirly haircut, a new dynamic Donkey Kong (grandson to the pioneering Kong) was let loose inside a vast, side-scrolling gaming reserve. Aided by his nephew Diddy Kong, in typical run-and-jump fashion, they had to collect bananas, stomp on heads to defeat the evil King K Rool and his band of Kremlings. The game introduced a number of features that helped it stand out from other platform games, and a number of new Kongs into the *Donkey Kong* series, too. The game made use of a unique tagging system, which allowed you to switch between Donkey Kong and Diddy Kong at any point during the action, and it also saw the duo jumping onto the backs of their animal friends and using their vibrant jungle surrounding to great effect.

When the game was finally unveiled at the Summer Consumer Electronics Show in 1994, many of the attendees were left dumbfounded by the fact that the game was running on a humble SNES. Selling over 8 million copies, it went on to become one of the biggest-selling 16-bit games of all time.

Donkey Kong Country later spanned two further SNES sequels. The second game, *Donkey Kong Country 2: Diddy's Kong Quest*, chronicled Donkey Kong's capture at the hands of King K Rool and the rescue effort by Diddy and his sister Dixie. Rare tweaked the gameplay by introducing a number of new features into the game. It adapted the decisive 'buddy' system to allow you to hit enemies and reach inaccessible areas using the other character. It also introduced Easter eggs and secrets that would require meticulous scavenging and increase the game's longevity.

The third and final game in the *Donkey Kong Country* series, *Donkey Kong Country 3: Dixie Kong's Double Trouble*, was released in 1996. This time it was Diddy and Donkey Kong who would be held captive by the Kremlings (these Kongs should really start reading up on Stockholm Syndrome). With Dixie and little brother Kiddy Kong supplanted in the lead roles, the third adventure introduced side quests and a greater need for exploration. But considering the huge inaugural leaps in gameplay that the first two games had taken, it felt like a lacklustre farewell to the Super Nintendo – a sentiment reflected in its reviews and sales.

Nintendo was late to enter the 32-bit arena, and as a result its new console became a bit of a 64-bit stopgap. Rare had proved instrumental in helping the N64 achieve early commercial success with its titles *Blast Corps*, *GoldenEye* and *Banjo-Kazooie*, and having demonstrated its technical flair by squeezing whatever juice was left from inside the ageing Super Nintendo, the company was once again handed the responsibility of *Donkey Kong* by Nintendo.

Ironically, a new console marked yet another new direction for the series. *Diddy Kong Racing* was Rare's turn at the *Mario Kart*-racer. Its unique mix of racing and adventure ran rings around the *Mario Kart 64*'s short life span, and it soon edged in front of the prolific karting classic.

In 1999, Rare's Gregg Mayles spearheaded *Donkey Kong*'s eventual platform transition to Nintendo 64. Utilising the *Banjo-Kazooie* engine, *Donkey Kong 64* was a sprawling adventure that was so huge that it came bundled with an extra 4MB of RAM. Coincidentally, it was the first title to make use of the N64 expansion pack, and special editions of the game would be packed in banana-yellow cartridges. The game's plot centred on more Kong abductions and even more banana collecting, it introduced further apes into the franchise and its electric intro was the first time we ever got to hear the peculiar *Donkey Kong Rap*. The game was greeted with mixed reviews by the press. Some argued that the game felt too similar to *Banjo-Kazooie*, others thought that it failed to pack the same punch as *Donkey Kong*'s Super Nintendo debut. Regardless, the title proved popular and eventually went on to win the E3 Game Critic award for Best Platform Game in 1999, and become widely considered a popular appendage to the *Donkey Kong Country* series.

In 2002, as a result of a record-breaking $377 million acquisition by Microsoft, Rare was no longer an exclusive developer for Nintendo. It would work on exclusive titles for the Xbox console and continue to develop games for Nintendo's handhelds. This deal was to spell the end of the planned GameCube racer, *Donkey Kong Racing* – the highly anticipated follow-up to *Diddy Kong Racing*. A video of the running game was exhibited at E3 in 2001, featuring Donkey Kong and friends racing on the back of their animal friends. This cancelled project led many to feel that the future of *Donkey Kong* could be in jeopardy.

However, he was to make a noisy re-emergence in 2004, with the most peculiar genre-dip in the franchise to date. Developed by Namco, *Donkey Konga* was a quirky game that retained the *Donkey Kong Country* 'look' that Rare had infused into the series. It allowed gamers to test their mettle on a set of plastic bongos, and keep the beat to a playlist of classic gaming gems. Favourable reviews and brisk sales saw the series spawn two sequels, with the latter only getting a Japanese release.

Donkey Kong finally returned home in 2005 for *Donkey Kong Jungle Beat* on the GameCube. Developed by Nintendo's EAD (Entertainment Analysis and Development) department, the final Donkey Kong caper on the GameCube was a unique platform adventure that borrowed rhythmic elements from *Donkey Konga*. Hitting the left and right bongos moved Donkey Kong in the corresponding direction, through his beautiful, animated world. It also introduced a unique combo system that appealed to high-score chasers and gave the game immense longevity.

The latest chapter in *Donkey Kong*'s lengthy bio saw two games released on Nintendo's Wii. *Donkey Kong Barrel Blast* was a disappointing racing game, while *Donkey Kong: Jungle Beat* was a solid update of the GameCube original. Enhanced with widescreen support and dispensing with the bongos of the original – although you could still use them if they were lying around – it's a solid addition to Nintendo's New Play range and proves that it is possible to teach an old simian new tricks.

It has certainly been a sporadic life for *Donkey Kong*, and trying to confine the series to one particular genre has proved nigh on impossible. From softening the *Radar Scope* backlash, to bankrolling the Famicom, *Donkey Kong* has always played a prominent role in Nintendo's history. It was the title that launched the company's empire, and first introduced the world to Mario. It's a pivotal game for Nintendo, and a special one for Miyamoto.

"I like all the games that I've worked on," Miyamoto says, "so it's really hard to pick any one game, but I guess, because of its impact and because I started it at a time when there wasn't even anything called 'game design', I guess it would have to be *Donkey Kong*. It was from there that I chose the path that I took and went from a simple industrial designer to a 'game design specialist'."

DONKEY KONG



After debuting as a girlfriend-stealing ape, Donkey Kong has gone on to star in numerous games. Clearly not shy of the spotlight, Donkey Kong has made cameo appearances in dozens of Nintendo titles, many of which we didn't have room for here. Most of the time you need to look really hard, but perseverance does pay off. *Punch-Out!*, *Super Punch-Out!!*, *Tetris*, *F1-Race*, *NES Open Tournament Golf*, *Mario's Time Machine*, *Super Mario RPG* and *Mario Tennis* on the Game Boy Color are just a few of Donkey Kong's starring moments.

Now, as well known as his original nemesis, Mario, the celebrity simian's family tree is long overdue…

DONKEY KONG



- 1981
- Arcade
- When Nintendo's *Radar Scope* was a flop, Miyamoto was asked to create a new game. The result was this classic, which established Nintendo as a firm to watch. With simple but addictive gameplay, this title saw Donkey Kong's debut.

DONKEY KONG JR

- 1982
- Arcade
- *Donkey Kong Jr* saw the tables turn as the eponymous hero rescued his dad from the clutches of Mario. With four distinctive levels – The Vines, The Chains, The Jumpboard and The Hideout – this was just as enjoyable as *Donkey Kong*.

DONKEY KONG CLASSICS

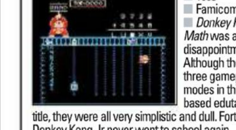
- 1982
- Famicom
- Cashing in on *DK's* success, Nintendo released *Donkey Kong Classics*, a rehash of *Donkey Kong* and *Donkey Kong Jr*. Although it was just an amalgamation, fans loved it. An arcade version – *Double Donkey Kong* – was also released.

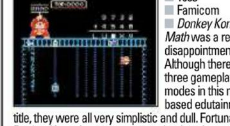
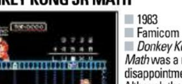
DONKEY KONG 3

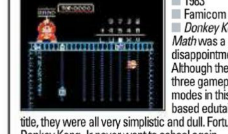


- 1983
- Arcade
- Nintendo released the third *Donkey Kong* game in as many years in 1983. Stanley replaced Mario and you had to shoot DK with insect repellent while guarding five plants at the bottom of the screen. Fun, but not in the same league as the previous games.

DONKEY KONG JR MATH





- 1983
- Famicom
- *Donkey Kong Jr Math* was a real disappointment. Although there were three gameplay modes in this number-based edutainment title, they were all very simplistic and dull. Fortunately, Donkey Kong Jr never went to school again.

HANDHELD

GAME & WATCH SERIES

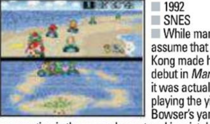
- 1982 – 1984
- Game & Watch
- There are many strange and quirky LCD titles that Donkey Kong has appeared in. We've already touched on the original *Donkey Kong* and *Donkey Kong Hockey*, but how about *Donkey Kong 3*, which is nothing like the arcade game. There's no Stanley, no wasps, just Mario and Donkey Kong spraying insecticide in each others' eyes. Or how about the odd *Donkey Kong Circus*, which you could argue is a prequel to the original game. It finds the big guy balancing on a barrel while juggling pineapples and avoiding flames. No wonder he escaped. Then there are titles like *Donkey Kong II*, which has you playing as Donkey Kong's son who has to swing up vines and jump across the heads of crocodiles and Donkey Kong Jr (no guesses for who you end up playing there). Some of them now go for a pretty penny.

DONKEY KONG COUNTRY

- 1994
- SNES
- Created by Rare and featuring some of the most gorgeous visuals SNES owners had ever seen, this scrolling platformer felt incredibly fresh and proved there was life in the old ape yet. DK was the hero as he set out to find his stash of bananas.

RARE CONNECTION

SUPER MARIO KART



- 1992
- SNES
- While many assume that Donkey Kong made his SNES debut in *Mario Kart*, it was actually Junior playing the yin to Bowser's yang. This assumption is the second worst rookie mistake in videogame history (the first is purchasing an N-Gage).



DONKEY KONG

- 1994
- Game Boy
- It was inevitable that DK would appear on the Game Boy after his SNES success. The first four levels were identical to the original arcade game, but there were plenty of new ones, too. Mario had new abilities, but they spoilt the gameplay a bit.

DONKEY KONG LAND

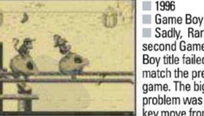
- 1995
- Game Boy
- There was no denying that Rare had created an extremely close conversion of its SNES hit, although it was obviously scaled down. While the visuals took a hit, all the gameplay from the SNES version had been captured perfectly.

DONKEY KONG COUNTRY 2: DIDDY'S KONG QUEST



- 1995
- SNES
- *Diddy's Kong Quest* was the superb follow-up to Rare's smash hit and added new twists to the gameplay. With Donkey Kong captured, it was up to Diddy and Dixie Kong to save him, and you were able to turn into various animals.

DONKEY KONG LAND 2



- 1996
- Game Boy
- Sadly, Rare's second Game Boy title failed to match the previous game. The biggest problem was that a key move from the SNES version – the great throwing system – had been dropped. The game was visually impressive, though.

DONKEY KONGA SERIES

- 2003 – present
- GameCube
- This popular rhythmic action game uses a set of bongos to bang out its tunes. The series has so far spawned three games, with the latter only receiving a Japan release. It's a shame because it boasts a great list of classic videogame tunes.

MARIO KART 64

- 1996
- N64
- Although it would be three more years before he featured in his own game again, Donkey Kong was happy to show his gaming versatility. After proving a popular character in *Super Mario Kart*, DK was behind the wheel again for the N64 sequel.

GAME & WATCH GALLERY SERIES



- 1997 – 2002
- GBC, GBA
- Starting with the second *Gallery* game, Donkey Kong immediately became a key character in the series. All the games here were perfect replicas of the original titles and included special re-creations as well. A great way to see some classics.

DONKEY KONG LAND III

- 1997
- Game Boy
- Despite having fewer RPG elements, Rare's third Game Boy title was a faithful adaptation of its last SNES release. The visuals looked highly impressive and Rare eventually ported the game to Nintendo's Game Boy Color.

DK COUNTRY 3: DIXIE KONG'S DOUBLE TROUBLE



- 1996
- SNES
- The last *Donkey Kong Country* game saw Dixie and Kiddie Kong saving Diddy and Donkey Kong. This title featured lots of mini-games and a few RPG elements. With visuals to die for, *DKC3* was one of the last big titles for Nintendo's dying machine.

DONKEY KONG JUNGLE BEAT

- 2004
- GameCube
- This stupidly addictive platformer milks further use from Donkey Kong's bongos (ooh, er). Controlling Kong by hitting the bongo-pads, it was a wacky score-chasing affair that was eventually re-released on Nintendo's Wii.

DIDDY KONG RACING

- 1997
- N64
- Although Kong himself was nowhere to be seen, Diddy Kong proved that he was just as good when it came to racing karts. With a superb adventure mode that took ages to complete, *Diddy Kong Racing* was another hit from Rare.

MARIO GOLF

- 1999
- N64
- Keen to prove there was more to him than just hanging around platforms and driving karts, DK showed he could play a decent game of golf. His size meant he was perfect for taking long, powerful shots, though often at the expense of accuracy.

MARIO KART SUPER CIRCUIT



- 2001
- GBA
- The lure of karting was too much for our favourite ape and he hit the tarmac once again in 2001. Created by the excellent Intelligent Systems and featuring all the SNES tracks as a hidden bonus, *Super Circuit* made for a great handheld experience.

DONKEY KONG COUNTRY

- 2000
- Game Boy Color
- Another rejig of the SNES hit, but this time the results were much closer to the original. Rare found time to add extra levels and a few enjoyable mini-games. Definitely worth playing, if only to see the improvements over *Donkey Kong Land*.

DONKEY KONG 64

- 1999
- N64
- Rare went to town with its next *Kong* platformer, which was so big it had to use the N64's Expansion Pak. With a funky theme tune and five controllable Kongs, *DK64* also contained a version of the original *Donkey Kong*.

DONKEY KONG: JUNGLE FEVER

- 2005
- Arcade
- At one point we thought it was an arcade re-dux of *Jungle Beat* and then were certain it was a peculiar looking pachinko machine. It's actually a penny-falls game that, despite its moniker, has nothing to do with Spike Lee.

SUPER SMASH BROS SERIES

- 1999 – present
- N64, Wii, GameCube
- Pitting some of Nintendo's well-loved characters against each other, *Super Smash Bros* is an immensely enjoyable brawler that finally allowed Donkey Kong to wrap his big hairy banana openers around Mario's throat.

MARIO PARTY SERIES

- 1999 – present
- N64, Wii
- The *Mario Party* franchise has had varying degrees of success. Nintendo updates each iteration with new mini-games and characters, but for us the third and fifth games are the best as they pushed the series in new directions.

MARIO VS DONKEY KONG



- 2004
- GBA
- Donkey Kong is the bad guy again and Mario must travel through six huge worlds to retrieve the mini-Marios that the giant ape has stolen. With a combination of puzzle and platform action, *Mario Vs Donkey Kong* already sounds very promising.

DONKEY KONG COUNTRY

- 2003
- GBA
- Hoping to make a quick buck, Nintendo re-released its SNES classic and added a few extra mini-games. Sadly, the visuals were nowhere near as impressive as before and even the gameplay seemed to have suffered in the translation.

DONKEY KONG COUNTRY 3

- 2005
- GBA
- Probably the most faithful of the three GBA ports when comparing them to their SNES counterparts, but that's only because hardly anything new was added or tweaked this time out. It's still a great game nonetheless.

OFFBEAT

MARIO TENNIS SERIES

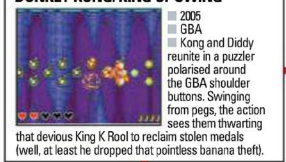
- 2000
- N64
- The lure of a good sports game was always tough for Donkey Kong Jr to resist so he joined Mario and Luigi on the tennis courts. The big ape could pull off some very impressive shots and was a tough adversary. A Wii version is now available.

DIDDY KONG RACING DS



- 2007
- DS
- This remake of Diddy's popular kart classic introduced a track editor and online racing. It's a faithful conversion that fans of the original will no doubt dig, but sadly its weak stylus features feel a tad shoehorned and somewhat flawed.

DONKEY KONG: KING OF SWING



- 2005
- GBA
- Kong and Diddy reunite in a puzzler polarised around the GBA shoulder buttons. Swinging from pegs, the action sees them thwarting that devious King K Rool to reclaim stolen medals (well, at least he dropped that pointless banana theft).

DONKEY KONG COUNTRY 2

- 2004
- GBA
- This was one of the better *Donkey Kong Country* ports to appear on the GBA. It boasted a few new moves and a whole bunch of cool mini-games, offering a well-needed break from all that monkey business.

MARIO VS DONKEY KONG 2: MARCH OF THE MINIS

- 2006
- DS
- This comical puzzler brought back that messy love triangle between Mario, DK and Pauline. It's basically a *Lemmings*/*Krusty's Super Fun House*-type puzzler, without the lemmings and without Krusty.

DONKEY KONG: BANANA KINGDOM



- 2007
- Arcade
- Another penny-falls game from Capcom, but this time it's a six-person game. But that doesn't mean it takes six people to play it, rather that six people can feed a yen to Kong at precisely the same time.

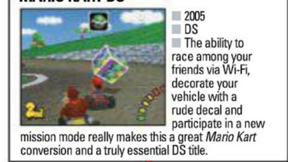
MARIO KART: DOUBLE DASH!!

- 2003
- GameCube
- Now that each Kart could carry two players, it was finally possible to create the ultimate monkey duo. The combination of Diddy Kong's speed and Donkey Kong's handling meant the furry pair were extremely tough to beat.

MARIO SLAM BASKETBALL

- 2007
- DS
- Nintendo's ape certainly loves his sports. This time the tie-wearing brute takes to the basketball courts and shows off his ball skills. Interestingly, this is by Square Enix, best known for their many RPGs.

MARIO KART DS



- 2005
- DS
- The ability to race among your friends via Wi-Fi, decorate your vehicle with a rude decal and participate in a new mission mode really makes this a great *Mario Kart* conversion and a truly essential DS title.

DONKEY KONG JUNGLE CLIMBER

- 2007
- DS
- The follow up to *Donkey Kong: King Of Swing* is rumoured to maintain the peg-clutching gameplay while also making intelligent use of the DS stylus. It also reverts back to the shiny look of Rare's *Kong*.

DONKEY KONG BARREL BLAST

- 2007
- Wii
- Reported to have been created from the guts of Rare's *Donkey Kong Racing*, *Barrel Blast* finds Donkey Kong and his crew straddling jet-powered barrels in a strange hybrid of *Diddy Kong Racing* meets *WipEout*.

MARIO STRIKERS

- 2007
- Wii
- We're avoiding the Wayne Rooney/Donkey Kong jokes that are lining up to be blasted out of the park (that would just be mean and immature). It's no *Pro Evo*, but where *Mario Strikers* really excels is in multiplayer – just ask Ian Wright.

YOSHI'S ISLAND DS

- 2006
- DS
- Baby Donkey Kong is just one of the many cute Nintendo stars that Yoshi gets to ferry around in this charming little platformer. Yoshi can use his furry friend to climb vines in order to get to out-of-reach platforms.

DEVELOPER LOOKBACK

IT CREATED GENRES AND SHAPED THE WAY THAT WE PLAYED GAMES IN ARCADES, CASINOS, FITNESS CLUBS AND AT HOME. TIMES CHANGE AND SO DOES KONAMI, AND THAT'S WHAT SETS IT APART FROM ITS CONTEMPORARIES. MIKE TOOLEY TAKES A LOOK AT THE ONE VIDEOGAME FOREFATHER THAT JUST CAN'T STOP PIONEERING



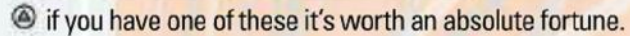
Konami (PART 1)



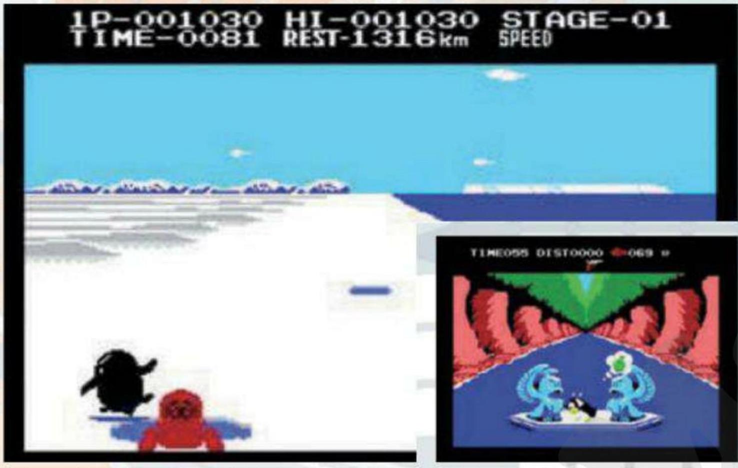
Some might argue that Konami doesn't release much these days; these people are of course wrong. For while most game publishers court publicity at every turn, publishing many versions of one game, and therefore giving an impression of grandiose scale, Konami is content with low-key advertising, knowing that it's delivering solid titles honed for each format. You would have to own many systems to get a real feel for Konami and all of its games, and it makes no apologies for that either. Its games are coveted and anticipated by gamers in a way reminiscent of the late 16-bit and early 32-bit era, where new releases were often hallmarked by new features and technologies. You only have to look at any *Pro Evo* release and the more recent *Metal Gear Solid 4: Guns Of The Patriots* to realise this.

The early Konami showed the facets of what Konami would become, but Darwin himself would have struggled to plot the evolutionary path that it eventually followed. Founded in 1969 by Kagemasa Kozuki, its original incarnation, Leijac Corporation rented and maintained jukeboxes to Japan's then rapidly expanding leisure establishments. Based in Osaka, the company eventually expanded and for a short time even licensed music tracks to be played exclusively in its machines.

As the Sixties gave way to the Seventies, music was changing, Japan was opening up to Western influences and the accessibility of airwaves led to many establishments moving away from jukeboxes in favour



if you have one of these it's worth an absolute fortune.



Antarctic Adventure's Penta is Pentarou's father. Rumours persist, however, that he's the same bird that appears in Sega's *Pengo*.

KONAMI INSTANT EXPERT

KONAMI

After the disappointing showing of *Haunted Castle* in the arcade, Konami not only released *Simon's Quest* the following year, but it also added *Castlevania* levels and characters to *Konami World* on NES by way of an apology.

Konami created Frogger, but it appeared almost everywhere with the Sega logo. Sega thought it owned the rights and indeed licensed the game to Parker Brothers, who cordially converted the game bearing the Sega logo. Two court hearings to date have taken place and ownership remains unresolved, with the two now having an unspoken agreement on the title.

Konami wasn't averse to using famous film stars to help sell its games. If you look at the box art of *Metal Gear,* Solid Snake looks remarkably similar to a certain Michael Biehn.

When Scramble was released Konami neglected to protect the hardware and software, this led to many companies releasing the game as their own. Bizarrely, it was Stern who prosecuted most of the companies involved and it was also awarded the patent for *Scramble's* moving images.

In the UK, Konami conversions were handled by Imagine Software, the quality of the 8-bit versions shone when compared to Konami's own bare bones NES releases.

Konami became famous for its cheat codes in the late-Eighties with Up, Up, Down, Down, Left, Right, Left, Right, B, A working on almost all of the company's games. Where did it come from? Kazuhisa Hashimoto, who programmed the Famicom *Nemesis* explains: "The arcade version of *Gradius* is really difficult. I never played it that much, and there was no way I could finish the game, so I inserted the so-called Konami code."

Konami's first licensed game *Cabbage Patch Kids* was based on the dolls of the same name. Its first movie licence was the lamentable *Goonies*, but this almost didn't get released as it was caught in the turmoil surrounding the film's release.

Without Konami, EA would not have published on the NES. Trip Hawkins refused to agree to Nintendo's terms, so Konami distributed and occasionally converted EA games to the system, which is why games like *Skate Or Die!* have Konami's details if you're downloading them from the Wii's Virtual Console service.

More units were sold and more money was made from the *Teenage Mutant Hero Turtles* machine than any other arcade machine in the Eighties.

Konami has never released a game on a launch day of any console.

of piped music. Kozuki needed to adapt. With the help of his business partners Yoshinobu Nakama, Hiro Matsuda and Shokichi Ishihara, the company moved into amusement machines catering to the same leisure market with new technologies such as the then primitive pachinko machines and pintables.

In 1973 they founded Konami Industry Co Ltd for ¥1 million. The new company took its name from an amalgamation of the partners' names, with the literal translation being 'small wave'. The new Konami relocated to 124-1 Meishinguchi, Toyonaka, Osaka, an industrial complex on the edge of the city. From there it started manufacturing amusement machines under licence, while Matsuda and Ishihara founded Konami's first R&D division, looking at the use of microprocessors in amusement machines. Kozuki meanwhile was becoming enamoured with Nolan Bushnell's *Pong*. He had seen *Space War* on one of his frequent trips to the US, but knew from his own experience that if you were going to sell to the mainstream, the product had to be accessible to the mainstream. With *Pong* it seemed that Bushnell had achieved this. The company made haste and in 1974 released a primitive maze game locally. *Maze* was created on a simple arcade board that Konami's research team had put together and involved moving an oscillating block to the centre of a maze. Returns weren't exceptional, but were healthy enough to reinforce Kozuki's belief that arcade videogames were the next big thing. The board was slightly improved and three new games were released over the following two years. *Block Game*, *Block Invader* and *Space Ship* were three very basic games that all lacked the magic of *Pong*. Despite this, all three showed a moderate return that validated Konami's endeavour.

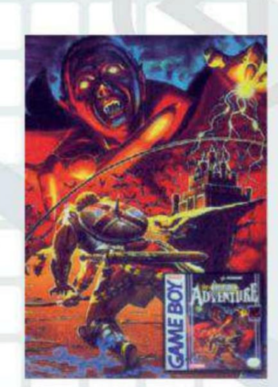
In late-1978 Taito released *Space Invaders* and the world of videogames changed forever. Kozuki bought a machine and reverse engineered it, the hardware it ran on was simple, but Konami struggled to replicate its own version quickly, so instead licensed the Taito 8080 board. By 1979 it had released three more games – *Space King*, *Space King 2* and *Space War* – to a limited Japanese market and smaller test market in the US. While *Space King* and its sequel were *Space Invaders* clones, *Space War* was an innovative two-player affair that saw players competing with each other to shoot down the most enemies. The protagonists were reminiscent of *Star Wars* craft, and gameplay was balanced in such a way that a two-player game created the same tensions and emotions as *Pong*. Konami had finally found what it was looking for.

Kozuki, however, felt that Konami was losing ground on the competition. Taito got it right with its second game, while it had taken seven games for Konami to acquire even moderate success. A board meeting was hastily arranged in April 1979. At the meeting it was agreed that Konami shouldn't license technologies in the future, but should instead create its own, therefore allowing the company to stay ahead of the competition. It was also decided here that Konami would need to expand the market it operated in. Until this point, Konami games were rarely seen outside Osaka.

While Kozuki and Nakama looked at new markets and explored licensing deals – which would see Konami's games reach all of Japan, the United States and Europe – Konami's R&D department worked tirelessly on a new arcade board that was to be better than anything else that was on the market at the time.

Initially, it remodelled the 8080 board, adapting it with a Z80 processor, which was first seen in the Eighties *Astro Invader* game. Although it was an improvement, it was nothing like the design that the Konami board had anticipated.

Adding pressure to the R&D team at the time was a group of programmers who had grown in confidence with each release, now their demands were in advance of the capabilities of the technology available



The first Konami game for the Game Boy.

DEVELOPER LOOKBACK

WHERE ARE THEY NOW?



Kagemasa Kozuki

Konami's founder, Kagenasa Kozuki, is a revelation in the games industry. Unlike his peers he didn't receive a corporation as a birth right. His passions paint a diverse collage of interests and it is difficult to understand what drives him.

Starting out renting and repairing jukeboxes, Kozuki had a passion for the industry at large. At heart he was a sportsman, and from his share of the *Scramble* profits and with local government assistance, in 1982, he created the Kozuki Foundation, and to this day he's contributed to promote and develop sports, educational and cultural-related activities. The foundation supports sports athletes and instructors representing Japan.

The Kozuki Sports Award in Japan is as prestigious as a gold medal, and is given to athletes representing Japan who have achieved outstanding results in Olympic Games, World Championships, or other equivalent athletic meetings. He was even part of the J League rejuvenation of the early-Nineties that brought the likes of Gary Lineker to Japan.

With Konami's rapid expansion into health fitness and casinos across the world, Kozuki has proved that he is a true empire builder. The roots of *Track & Field* have many similarities with the roots of Electronic Art's *Madden* – one man's folly on which an empire was built.

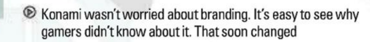
KOZUKI FOUNDATION
FOR SPORTS AND EDUCATION





Part of the *Snatcher* design document.

These toys, which starred on the cover art, were made in limited quantities for the Japanese market.



Konami wasn't worried about branding. It's easy to see why gamers didn't know about it. That soon changed

to them, as Kozuki explained during an interview with *RePlay* magazine in the mid-Eighties: "Suddenly we had a team of programmers, whose competence and imagination exceeded hardware limitations, we knew their games would sell if only we could produce them."

Eventually the R&D team conceptualised and built the Scramble hardware and the board arrived early in 1980. Konami already had a lot of software ready for the new hardware that was being stored on older models of the boards, and it wasn't long before these machines hit the arcades and gamers got their first taste of the Scramble hardware. The board itself took its name from *Scramble*, a game that couldn't be completed on the old hardware due to graphical limitations.

However, Konami made a mistake here that would shape the future of the gaming industry. It deliberately left out security software from the arcade board, and more importantly at that time, the games, so that it could port its backlog of software more quickly. More on that later though…

Kozuki and Nakama, meanwhile, revisited Stern Electronics, a long-time partner from the days of pinball and amusements. Both parties knew that Stern had access to more arcades and outlets for amusement machines across the US than anybody else at that time. Most of the money made from games came from arcade operators and myriad business models for the rental, ownership and placing of machines. Stern had the network and the facility to be able to manufacture and place Konami's machines across the United States and, to a lesser degree, in Europe. For Stern, the attraction was that it wanted to enter the gaming arena, but was finding it challenging to do so. For Konami, it now had a platform for its new hardware.

While Stern took up distribution in the US, Sega was to undertake the challenge for Konami in Japan, and had first refusal on any games that Stern didn't license for the US market.

With a network in place, Konami delivered 26 arcade games to market in 1981 via the Scramble hardware. Licensees tended to replicate Konami's actual games, but as Konami was still benefiting financially it took no action. The Scramble hardware was a runaway success; most arcade boards didn't see that many games in a lifetime. Meanwhile, Stern, too, licensed the hardware to further its own videogame ambitions.

Astonishingly, given the frequency of releases, it was the quality on display that amazed gamers and the industry alike. *Scramble* was the top performer of the initial run, shifting 10 million units and making $20 million in just two months. Contrary to popular belief this wasn't the first *Nemesis*, but a standalone shooter that saw the player piloting a jet fighter. Such was the clamour for *Scramble*, its sequel *Super Cobra* was released just four months later – this time replacing the jet with a helicopter. While the likes of *Amidar* and *Video Hustler* did well at the arcades, it was *Frogger* that became the highlight of Konami's year. Distributed by Sega, *Frogger* became the must-have arcade title of 1981, and doubled the revenue made by *Scramble* in three months. Konami could do no wrong and Parker Brothers eventually converted *Frogger* to the Atari VCS, meaning Konami games had entered a new market that it hadn't considered entering until that point.

Despite the company's success in 1981, the board were unhappy. Things were going well, but it was losing a lot of revenue via third parties. Furthermore, if you asked the average gamer who made *Scramble* they would reply with an assured confidence 'Stern', and the same gamer when confronted with the same question for *Frogger* would reply 'Sega'. For all its success, Konami, like SNK at that time, was unknown to the masses.

Therefore, the decision was made to develop a new logo and to set up overseas operations, primarily in the United States and then in Europe. To fund these activities,

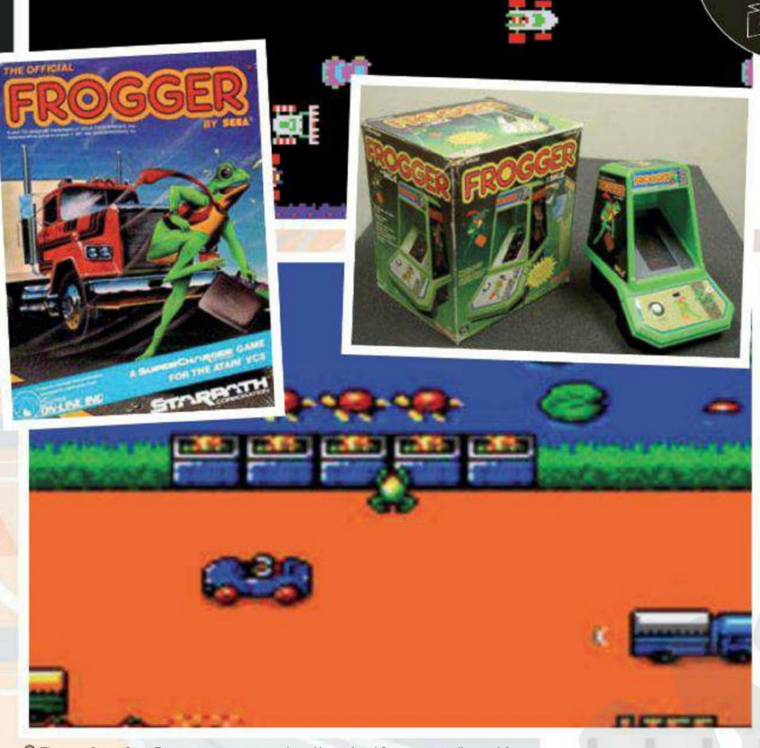


The Scramble hardware that sent Konami into the big league.



Teenage Mutant Hero Turtles was the biggest-selling arcade of the Eighties.





The rare Game Gear *Frogger*, can you guess where Konami and Sega went to discuss it?

Konami received investment from the Osaka Small and Medium Business Investment & Consultation Co Ltd. This provided much needed liquidity, as the nature of its licensing agreements meant that it was paid almost on a royalty basis for a game's success, sometimes 12 months after the money was made.

By 1982, Konami had a new corporate identity and, more importantly, a US base, allowing it for the first time to manufacture direct to consumers in the States, as well as Japan. Another raft of games followed, but this time to a more muted response. The arcade marketplace was becoming overcrowded and operators were now reluctant to replace known money-making machines, ironically two of these were Konami's own games. SNK, Taito, Sega and Universal all hit their strides in 1982 making it a golden year, while Konami's restructure had once again put it behind the competition. Its sales performance was less than stellar, although the saving grace was *Time Pilot*, a four-way scrolling shoot-'em-up, that became a true classic. Then came the quirky platform-styled game *Roc 'N Rope*, which saw the main character swinging across chasms while avoiding enemies.

Most notably in 1982 for Konami, Parker Brothers released *Frogger* on VCS (featuring Sega's name on the box, which signalled the start of a fallout between the two Japanese companies that last a whole decade), and continued to publish Konami games like *Amidar* on the Atari system, while *Scramble* finally made a belated home appearance on the ColecoVision, and the Texas range of PCs.

However, 1983 turned out to be the watershed year for Konami – the year that gamers noticed the company as a real gaming force. By now well-established in the US, Konami released to of its most significant arcade games in 1983: the first, *Gyruss*, was a game styled around the exceptional *Galaga*, but improved on the game immensely finding the middle ground between the aforementioned and *Demon Attack*. But it was late in 1983 that Konami released one of the most famous arcade videogames of all time, and burnt its brand into the psyches of gamers the world over.

International Track & Field contained six athletic events, and brought two-player arcade gaming to a plateau few games have reached since and none had arrived at before. It was the controls that ushered in a new spirit in two-player gaming, a game of athletics that required athletics to play it – two run buttons and an action button saw players frantically button bashing to power their on-screen avatars, the speed of players matched the speed of the on-screen athletes. Resplendent with occidental Easter eggs, *Track & Field* was a master of invention that left all who saw it spellbound. So impressed was Atari that it approached Konami for the licence and went on to bundle the 2600 version with a special controller that was far more durable than the standard joypad, mimicking the arcade setup and allowing players to bash as hard as they would in the arcades. With the media build-up of what would become the most watched Olympic Games of the modern era, the longevity of *International Track & Field* was assured.

Towards the end of 1983, Konami decided to enter the home computer industry properly, throwing its considerable weight behind the new series of MSX computers that were becoming evermore

SIX OF THE BEST

Pooyan 1982

A simple retelling of the Three Little Pigs story, *Pooyan* became an instant classic when it was released in arcades. The player takes control of a pig, armed with a bow and arrow, being hoisted up and down in a lift, with the general idea being to shoot the balloons that are laden with wolves. Cleverly layered strategies and awesome cut-scenes made *Pooyan* an absolute must-have.



Scramble 1982

The game that defined a generation. The taunt: "How far can you invade our Scramble system?" was soon the talk of playgrounds, and in a world where scores were what mattered, it was all the player needed. Scrolling to the right, you had to infiltrate the Scramble system, bombing fuel dumps to replenish an ever-decreasing supply. Made better in the arcade for its lack of home versions.



Shao-lin's Road/Kicker 1985

The game that was almost a sequel to *Yie Ar Kung Fu*. After seeing *Kung Fu Master*, Konami decided to create a fighting game derivative. Played out over four levels with occasional bosses, the player must defeat all enemies on a level before moving on to the next. *Elevator Action* meets martial arts perhaps. Excellent fun, but sadly overlooked nonetheless.



Hyper Sports 1984

The sequel to *Track & Field* became the videogame companion to the 1984 Olympics. More refined than its predecessor, it had a host of new events to delight gamers. Skill was as important as brute force this time, with many complaining they couldn't pass the vault stage. For those who did, a great game awaited. The weightlifting alone was worth the credit price.



Teenage Mutant Hero Turtles 1989

The most sought-after IP of 1989. Konami gave the kids what they wanted with this behemoth. All the characters from the show were included and the animation was better than the cartoon, as were the cut-scenes. Louder than anything the arcades had seen until that point, *Turtles* defined what would be the arcades of the early-Nineties. Plays nice, even today.



Super Contra 1986

Contra's sequel featured more over-the-top action and plenty of carnage. The visuals and sound were better, the gameplay was tough, but rewarding, and gamers could be heard whooping with delight as they took a boss down. For the first time in the series the bosses had imagination, but the home variations (known as *Super C*) were disappointing

DEVELOPER LOOKBACK

Konami didn't often get it wrong, but when it did it did so with aplomb. As *Gangbusters* proves.

Frogger *Super Cobra* *Time Pilot*

Gradius *Contra*
Castlevania
Sorcery



Badlands

Michael Biehn is Solid Snake. Well, he is on the box art.

Nemesis
Scramble

Shao-lin's Road *Yie Ar Kung Fu* *Green Beret*



Green Beret

Rush'N Attack *Nemesis*

Gryzor

Parodius is a superb mickey take of Konami's *Gradius* franchise.

KONAMI TIMELINE 1969-1989

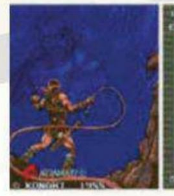
1969 | 1973 | 1978 | 1979 | 1980 | 1981 | 1982

SIX TO MISS



Combat School 1988

By now there were four versions of *Track & Field* and the movie of the year was Eastwood's *Heartbreak Ridge*, so Konami moved fast to get this out. *Track & Field*, under the guise of military training. The events were too hard, the graphics and sound were below Konami's usual standard, and all that you learnt was how to make a bomb.



Haunted Castle 1988

Castlevania is amazing, but Konami has got it wrong with the series occasionally. Here it cut the levels, softened the bosses and removed all but the most basic power-up. An attempt to share the success of *Rastan* that backfired, *Haunted Castle* is far removed from a hack-and-slash romp, and the sales proved that the Belmonts are best left at home.



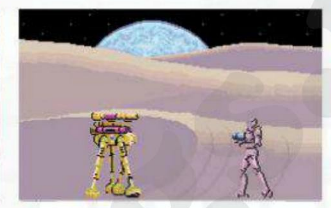
Tutankham 1982

This looked amazing and was really an early *Gauntlet*. The problem was that as you explored, you were so relentlessly attacked that you couldn't see where you were going. Enemies, such as bats and snakes, came at you from all sides, and as you fended them off, the clock was ticking. Time runs out, game over. Relentless and awful.



WEC Le Mans 1986

Le Mans was the game Konami hoped would close the gap on Sega's great racers. Sadly, the graphics were so fast many gamers felt nauseous, while the game itself was housed in a cab that spun when the car did. Many operators removed the machines for health and safety reasons. Would have been more successful if marketed as a theme park ride.



Galactic Warriors 1984

The original *Rise Of The Robots*. Despite the impressive visuals, *Galactic Warriors* has one of the clumsiest interfaces of any arcade game. Two meagrely paced robots do stop-motion battle in outer space (controlled by a stick and three buttons), it seldom feels like the gamer has any control over the proceedings.



Jailbreak 1986

Konami created retro gaming in 1986 by releasing a game that looked 20 years old at inception. There's been a jailbreak and it's your job to shoot some villains, while avoiding civilians, repeating for as long as you have heart for it. It's the only arcade game where gamers don't want to see the title screen. What it does it does well, but it does so little.

"AS THE EIGHTIES DREW TO A CLOSE KONAMI LEFT ITS MOST INDELIBLE MARK ON GAMING – TEENAGE MUTANT HERO TURTLES"

Japan, the MSX and MSX2 housed what would become two of Konami's finest games, Kojima's *Metal Gear* and *Snatcher*.

Nintendo was suitably unimpressed by a lacklustre line-up of games from third parties. It didn't want thick and fast, it wanted quality. In an unprecedented reaction, Nintendo limited all licensees to release only five games per year.

Konami baulked at this decision and a meeting was called between Yamauchi Hiroshi, the then-Nintendo CEO, and Yoshinobu Nakama, Hiro Matsuda and Shokichi Ishihara of Konami. Neither was in a mood for compromise, and the middle ground that they found wasn't all that they had hoped for. Konami couldn't be granted an exception because of the other licensees, but an agreement was made that Konami could create a subsidiary that would share the same preferable terms that favoured the company when it came to Famicom development on the NES. Ultra Games generally ported MSX conversions to the NES and handle the distribution of EA games like *Skate Or Die* over the coming years.

As the Eighties drew to a close, Konami left its most indelible mark on the gaming landscape. Disenchanted with its own movie licence some years before, Konami sought new movie tie-ins, games that would, in Ankara's own words "Make people feel like they were in a movie."

The developer set up an internal team to source suitable properties to create games from. Fortunately, the team managed to hit gold first time. *Teenage Mutant Hero Turtles* was the first time the modern world had seen a brand experience such exposure, and Konami had the rights to the game, and what a game it made.

A four-player title with, at the time, an oversized monitor and speakers. Konami wisely chose a simple side-scrolling walk-and-punch format, populating the game with everything that the cartoon had to offer, making it one of strongest licensed properties developed in gaming history. Konami also launched a downgrade kit that let operators turn old machines into two-player *Turtles* titles. The arcade game saw revenues not seen since the days of *Pong* and *Space Invaders*. While Konami toiled to bring the game home to the masses, Nintendo supplied the company with one of the few dev kits for the forthcoming Game Boy and Super Famicom. Things were about to get even better for the one-time jukebox heroes.



Crime Fighters: an excellent scrolling fighter that's brutal but humourous.

TURN TO PAGE **226** FOR PART 2

1983 KONAMI ENTERS THE HOME COMPUTER BUSINESS, DEVELOPING AND PRODUCING SOFTWARE FOR THE MSX RANGE OF COMPUTERS IN JAPAN.

1984 KONAMI SETS UP ITS UK OPERATIONS. THE GREAT VIDEO CRASH TAKES DOWN MANY OF KONAMI'S LICENSEE BUT LEAVES THE COMPANY UNSCATHED.

1985 KONAMI DEVELOPS THE FIRST ONE-ON-ONE FIGHTER TO HAVE SPECIAL MOVES: *YIE AR KUNG FU*. THIS IS THE YEAR THAT KONAMI GAINS LICENCES TO PUBLISH FOR THE NINTENDO FAMICOM.

1986 KONAMI STARTS TO RELEASE GAMES FOR NES. *CONTRA* MAKES ITS ARCADE DEBUT.

1987 KONAMI LOOKS TO BRING HOME TITLES TO THE ARCADES. DESPITE BEING POLISHED WITH SUPERIOR AUDIO AND VISUALS, *HAUNTED CASTLE* (THE *CASTLEVANIA* REMAKE) BOMBS. THE IDEAL FADES WITH IT. *METAL GEAR* DEBUTS IN JAPAN.

1988 KONAMI IS LISTED ON THE TOKYO STOCK EXCHANGE.

1989 KONAMI RELEASES *TURTLES IN TIME*, ITS BIGGEST SELLING ARCADE TITLE TO DATE.

THE CLASSIC GAME

RISTAR

Stuart Hunt travels to another planet to wake up Sega's most under-appreciated, self-effacing hero. You know the one that's spiky but yellow? Sonic Team's zip-soaring platform classic Ristar





IN THE KNOW



- PUBLISHER: SEGA
- DEVELOPER: SONIC TEAM
- RELEASED: 1995
- GENRE: PLATFORM
- EXPECT TO PAY: £5-10



Whatever happened to poor old Ristar? Continuously living in the shadow of a popular blue hedgehog, this fantastic sunny-looking chap achieved something that not even the big-headed butterball could manage: retain a clean sheet, a 100 per cent perfect gaming record. Okay, so it's a little bit unfair to compare Ristar to Mario and Sonic. After all, an ever-increasing chasm of over a hundred games and spin-offs sit between these three eponymous heroes. But why didn't Sega bless its yellow spiky one with his own sequel? He would have wholly deserved one, especially when the likes of Aero the Acro-Bat and Bubsy the Bobcat were allowed to go forth and commit some horrendous repeat crimes against double entendres and humanity.

Now, when compiling a list of the most famous stars in history, several names will certainly crop up. Well, arguably the most common, and probably sitting at the top of that list would be the sun, star of the Danny Boyle film *Sunshine*. He's not overly chatty and didn't even bother turning up to the film's London premiere, opting to send his pale-looking stunt double instead. There's also the shooting star that appears in almost every Steven Spielberg flick, Lucas's menacing Death Star, oh, and we mustn't forget the Star of Bethlehem that led three wise men to baby Jesus – without that star we'd have had no Christmas issue. So, there's a good chance that Ristar would fall in at around sixth, maybe even fifth place.

Now, despite their four-year age gap, Sonic and Ristar are historically linked. Both of these characters share the same father. No, it's not Yuji Naka, but a nameless rabbit with extendable ears. You see, when Naka was conjuring up a character to appear in his first platform game it was a bunny that he first had in mind. That was until he decided to bless his creation with the ability to roll into a ball and smash into his foes – not something you commonly see rabbits doing in the wild, unfortunately – and so the rabbit would be switched for a blue hedgehog.

After Sonic's release into a swathe of unprecedented popularity and critical acclaim, Yuji Naka looked back at his original rabbit concept to craft yet another platform videogame character. He switched the extendable ears for extendable arms, and after a few more subtle changes to the character – like

» Ristar can put his environment to good use. Grab this cotton-wool bud to access a hidden treasure.



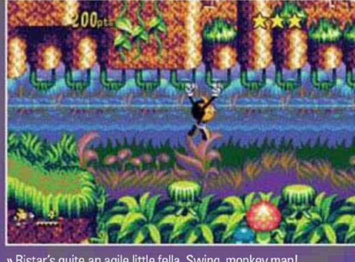
» The lighting effects throughout the game are some of the best on the Mega Drive.



» There's a possibility that this could be Naka's elusive wabbit!

swapping the rabbit for a boyish star in a pair of trainers – Ristar was born. Despite the poor old carrot-consumer getting tossed to one side again, Naka's muse still found a way to make it in to videogames. In the first Planet Flora stage of *Ristar* the player will encounter a peculiar-looking bunny, with long punching ears, that will jump out from behind a rustling bush and front up to our hero – a probable homage to that very early rabbit concept.

The differences between the *Sonic* and *Ristar* games come mainly from their pacing. Both games made great use of their bountiful worlds, but where *Sonic* is a game that projects the player forwards into a multitude of springs and loops effortlessly, *Ristar* is a game that requires much more care and attention. Ristar's outstretched gloves can grab onto enemies, swing from monkey bars, climb up walls and spin from switches. He's also blessed with a titanium forehead, so rather than stomping or spinning into his enemies, his attack is the act of grabbing an enemy's head and butting the poor sap until their nose bone gets forced up into their brain cavity. Yes, he might look like butter wouldn't melt in his mouth, but stars are notoriously hot-headed entities. So yes, it's probable that butter would melt, along with the plate and along with your arms.


» Ristar's quite an agile little fella. Swing, monkey man!

The reasoning behind Ristar's relatively short-lived career is not really of his own doing. The game was a final gift by Sonic Team to the Mega Drive and as such was released in the latter stages of the console's life. The quality and brilliance of the game was overshadowed by the visual glare of 32-bit gaming and also a certain re-emergence to the gaming circuit by a girlfriend-stealing simian.

For many platform enthusiasts, *Ristar* is raised up higher than the *Sonic* games, and it's easy to understand why. *Ristar* was, and still is, a wonderful-looking game. Each of its planetary parallax-packed levels is beautifully drawn and it's rammed with a quirky array of colourful bopping enemies that flit in and out of the screen. *Ristar* is a game full of life, character, sunny delight, wonderful cartoon animations, great bosses, a unique method of disposing of said bosses and a rather annoying underwater level… everything you could possibly ask for in a top-drawer platform game. And despite existing in the most over-saturated genre of its time, it still somehow managed to feel completely fresh. A shining light in a sky packed with glistening stars, you might say.



» Erm, more *Sonic* evidence wethinks.



» When Ristar receives a good kicking, he dies in a somewhat melodramatic fashion.

"FOR MANY PLATFORM ENTHUSIASTS, RISTAR IS RAISED HIGHER THAN THE SONIC GAMES, AND IT'S QUITE EASY TO UNDERSTAND WHY"

DEVELOPER HIGHLIGHTS

PHANTASY STAR
SYSTEM: MASTER SYSTEM
YEAR: 1987

NIGHTS INTO DREAMS
SYSTEM: SATURN
YEAR: 1996

BURNING RANGERS
SYSTEM: SATURN
YEAR: 1998



FEEL FAMILIAR?

Ristar shares more than just a few passing resemblances with Sonic Team's eponymous blue hog. As well as looking similar, both sport trainers and have spikes. Ristar's world and sublime cacophony was constructed using the same engine as the original *Sonic* game. Also, it's worth mentioning that the Japanese version of the game differs slightly from the Western release. In the Japanese intro, Ristar's mum can be seen stood over her son before he awakens. Also, it has a slightly gushier ending, with the boy-star running into the arms of his father after saving him from the nefarious Greedy. Below is some sublime fan art courtesy of Emerald Guardian, which gives a good impression of how Ristar might have originally looked in those early conceptual days.



THE MAKING OF...

ROBOCOP

In 1988, Manchester-based Ocean Software released what would become the biggest home computer game of the Eighties. Part coin-op conversion and part unique movie licence, RoboCop smashed records across the multiformat charts and became the blueprint for movie tie-ins. Robert Mellor talks to Gary Bracey about producing one of the most legendary and successful titles of the era

IN THE KNOW



» **PUBLISHER:** OCEAN SOFTWARE
» **DEVELOPER:** IN-HOUSE
» **RELEASED:** 1988/1989
» **GENRE:** PLATFORMER
» **EXPECT TO PAY:** AROUND £5-£10



With 8-bit micro versions released in 1988 and 16-bit ports the following year, Ocean Software's *RoboCop* became the quintessential videogame success story of the decade, subsequently putting the Mancunian software house firmly on the map and setting it up for many prolific and profitable years that reached well into the Nineties.

Having secured the electronic rights while the film itself was still considered an unknown quantity, Ocean produced a game that both converted Data East's monster coin-op hit and also added a sprinkling of originality to the game design. Pulsating action in the form of side-scrolling platform mayhem from the arcade was blended with puzzle and first-person shooter sub-games to create a diverse and faithful representation of the movie in a game that sold in the millions and topped the multiformat charts for what seemed like an eternity.

Ocean Software already had a track record with profitable film licences such as *Short Circuit* and *Rambo: First Blood Part II* when the licence rights for *RoboCop* became available. As the company's former development director Gary Bracey explains, he knew that a futuristic sci-fi action film with a Detroit cyborg cop out for revenge would be the perfect material for a computer game. "Being the 'movie buff', these scripts always came to me, as I was the only person who would read the damn things," he says. "I still have all the original scripts of movies like *RoboCop*, *Silence Of The Lambs*, etc. Anyway, I remember about ten years later, fellow exec Jon Woods showed me the *RoboCop* script he had kept for posterity. It had a yellow Post-it note on the cover on which I had scrawled, 'We should get this – it could be a winner!'"

"As far as I was concerned, the material was ideal for a videogame," he continues. "Science fiction, shooting, set pieces, etc. Also, the movie itself was quite low budget, which in turn allowed us to negotiate a very preferential deal. I think the guarantee we paid for worldwide rights on all electronic formats was in the tens of thousands." As the game went into production, the film was just hitting cinemas and starting to become a global phenomenon, as Gary recalls: "I loved the movie. The success of the film was a little bit of a surprise as we did take a flyer on it. The fact that the director was unknown, as were the cast, made it speculative at best. The script wasn't exactly a masterpiece of modern literature, but it did have the same gritty feel that *Blade Runner* had, which meant that if it had been made well it stood a pretty good chance of making its mark. It was and it did."

Although on the surface a generic genre piece, and sold on its ultra-violent

» A screenshot from the Commodore 64 version.





» These bonus stages were a diverting distraction from the main action.

» As ED-209 stomps on screen, RoboCop suddenly remembers he's left the iron on.

» Time it correctly and you can actually shoot this perp in the short and curlies.

» The arcade game may not have been as cerebral as its 8-bit peers, but it did look nice.

» Another boss from the arcade version that ended up appearing in the Amiga conversion.

» Don't be fooled by the bright colours. *RoboCop* was just as violent as its arcade peer.

sci-fi action, the film itself has gone on to be praised for its more cerebral elements and underlying metaphor and allegory – specifically its Americanisation of the Bible. Gary, however, explains that this element was never really a factor when opting for the licence rights. "Not that analytical, I'm afraid," he explains. "It was evaluated on the entertainment value and what the demographic would be. Basically, you take a science-fiction action film and, back then, at least, you have pretty much the same audience as that for computer games. The subtleties and subtext were immaterial as they wouldn't translate into game elements anyway."

With the rights acquired, it was a bizarre twist of fate that would bring an arcade machine manufacturer to a software company when Data East sought to sub-licence the title from Ocean in order to create its own arcade game. This would result in the rather ironic occurrence of Data East crediting Ocean Software on the Attract mode for its *RoboCop* coin-op – which Ocean would then go on to convert. Gary details the specifics to this somewhat unique event, "At the time, I wasn't directly involved in the Data East deal – that was Jon Woods and David Ward. They already had a relationship with that company as I think Ocean may have licensed a coin-op game from them earlier. When *RoboCop* came up, then we acquired all the worldwide electronic rights so Data East sub-licensed the coin-op and pinball rights from us. Cannily, they also negotiated the rights for us to convert the coin-op game. As a side note, the then-CEO of Data East was Ray Musci who went on to become president of Ocean of America a few years later."

When Ocean's own interpretation eventually went into development, Gary divulges that neither Orion, Paul Verhoeven nor the other film-makers were as protective over their intellectual property as Warner Brothers was with *Batman* the following year: "We had the usual approvals process, but they weren't very precious about the property at the time – not in the way Warner was with *Batman*, for instance." With the film being an American production and principal photography taking place in Texas, the on-set access Ocean would experience in 1989 for *Batman: The Movie* was out of the question. It was, however, gifted with some very useful reference material. "We did get a little video footage prior to the film release," says Gary. "However, keep in mind that as we were basing our game on that of Data East's then we never needed such reference. Data East visited the set a couple of times, I think, and were given access to pre-release footage and stills. The coolest thing I saw was the original uncut scene of Murphy's death – the triggering event that leads to him becoming *RoboCop*. It was mega-graphic for those days and substantially cut/edited when it finally hit theatres. I guess it was restored for the inevitable Director's Cut DVD."

As would be the case with his high-profile film tie-in in 1989, Gary himself was very close to the project of *RoboCop* and had a commendable slice of input

THE MAKING OF... ROBOCOP

DEVELOPER HIGHLIGHTS

BATMAN: THE MOVIE
SYSTEMS: SPECTRUM, COMMODORE 64, AMSTRAD CPC, ATARI ST, AMIGA, IBM PC AND COMPATIBLES
YEAR: 1989

NAVY SEALS (PICTURED)
SYSTEMS: SPECTRUM, COMMODORE 64, AMSTRAD CPC, ATARI ST, AMIGA, IBM PC AND COMPATIBLES
YEAR: 1990

TOTAL RECALL
SYSTEMS: SPECTRUM, COMMODORE 64, AMSTRAD CPC, ATARI ST, AMIGA, IBM PC AND COMPATIBLES
YEAR: 1991



for a company executive. "The main driving force behind the game was Mike Lamb," he explains. "Although the most significant elements were taken from the coin-op version, it was Mike Lamb who translated and adapted it for home computers. I think the one thing that was my idea was the Photofit bit. For some reason, I was always into faces in games and I think my career in this business has left a small trail of breadcrumbs leading to what I am doing at the moment (Digimask). The Photofit section of *RoboCop* is one of those breadcrumbs. Other than that, I just generally managed the development and oversaw the game on all the formats. Data East did the NES version, and we did the Game Boy. In fact, Mike Lamb did it."

While the resulting game would become memorable for many reasons, one of the most notable was the way in which it deviated from the norm of being a genre-specific game and incorporated the concept of several diverse sub-games that came together to form a complete experience. This would change the way software houses and players thought about videogames, and proved instrumental in Ocean's design process for many years to come. "I think we just wanted to make our mark," says Gary. "If we had simply converted the coin-op version then it wouldn't have been terribly satisfying creatively for the teams involved. We therefore wanted to put our own stamp and spin on the product, as well as differentiating it from the coin-op. Keep in mind the philosophy between the formats is very different: coin-ops want you to keep plugging quarters into the machine, whereas computer games are able to be a little more diverse and challenging. We wanted to take advantage of that freedom and also incorporate ideas/scenes from the film, which were not just the blasting/action elements. This became a philosophical template for future movie licences."

With the game finally wrapped and ready for release, the whole team were understandably proud of their work, as Gary remembers: "The question I would always ask was 'Does the game stack up on its own merits?' If the answer was yes, then the addition of a high-profile movie licence would make it into an enormous success. I'll admit we didn't knock the ball out of the park game-wise with every movie licence, but there were



» Data East's arcade game in all its glory. Are you hard enough to actually complete it?



» Chainsaw fiends are a right bugger to kill and rob you of large amounts of health.



» Come on, RoboCop. It's only a van. Pump it full of lead and say something funny like, "You'll be lorry you did that".



NICE SHOOTING, SON

The original 1988 Data East arcade game on which Ocean's release is partially based is an epic slice of Eighties coin-op action and a contender for the greatest side-scrolling shoot-'em-up of the decade. A legendary Attract mode, graphics that are remarkably reminiscent of the film, a slew of gritty effects and speech samples plus infuriatingly addictive gameplay perfectly encapsulate the relentless action of the explosive motion picture. With momentary respite coming only in the form of an occasional trip to the station for some FPS target practice, players must guide Robo through the criminal-infested streets of Old Detroit, from downtown to drug factories and everywhere in between, ultimately leading to the final confrontation with Dick Jones at OCP's high-rise. Gary reveals his own thoughts on this classic release and its eventual conversion: "I thought the game was great, although a little too tough to translate directly to the home computer version. I think we made the conversion a tad easier. Also, there were some parts that were just unachievable when converting to an 8-bit computer with measly memory. We thought we had taken the best bits and tagged on some of our own ideas. The mix was pretty good and the reviews and feedback reflected that."

quite a few I am proud to have on my CV: *RoboCop*, *Batman*, *Platoon*, *The Untouchables*, *The Addams Family* are all ones that come immediately to mind."

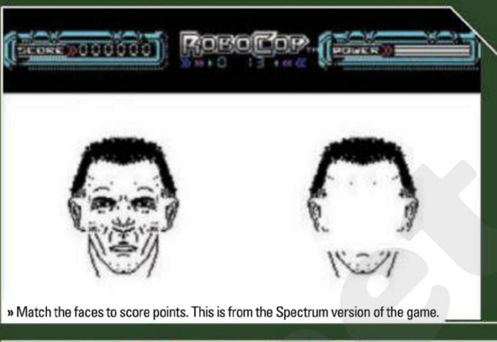
But even Ocean itself had no comprehension of the titanic success that was to ensue. "I don't recall exact figures, but I remember we celebrated when hearing that over a million units across all formats had been sold," says Gary. "This was by far the biggest release Ocean had ever had at the time and there were a lot of smiling faces. An incredible achievement for a little northern English games company. I think that is the game that put us into the big leagues and gave us an entrée into the US, and ultimately Japan."

The staggered release of the more arcade-faithful 16-bit renditions in 1989, meanwhile, helped boost sales when the 1988 8-bit versions started to drop down the charts. Gary feels that this was a conscious decision, "We didn't have the same restrictions with the ST that we had with the Spectrum, obviously, and so we were able to convert a more faithful adaptation of the coin-op. As for the inclusion of the mini-games, well, they had become our own trademark and had been well received so it made sense to keep them intact."

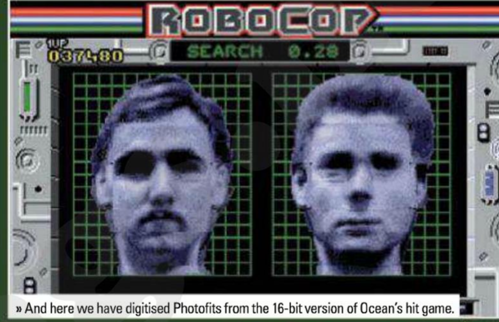
By the close of the decade when Ocean found itself on the verge of another colossal release with *Batman: The Movie*, *RoboCop* had become the biggest home micro film licence success in history. This would have a knock-on effect on the company's future endeavours, leading to it translating many other movies, including the *RoboCop* sequels.

"Much like the movie sequels themselves, they were unable to repeat the same success," Gary says. "In fact, after *RoboCop 2*, I thought we could try to break some new ground and so asked Digital Image Design to create a second sequel. Note that this was not based on a movie at the time; it was 'our' *RoboCop 3*. It didn't work terribly well, as I think DID were out of their comfort zone creatively. But it was a genuine attempt to bring something new and innovative to a movie licence."

But it's the original that will remain the crown jewel in Ocean's legacy of achievements. Gary concludes: "There was a great spirit of collaboration on this project. Everyone involved contributed something of significance, without which it wouldn't have been the same… or as successful. Quite rightly, I think anyone who owned a piece of the *RoboCop* design/development has the right to feel proud. They were great days; great people and I believe that Ocean was the best place in the industry to work back then. The morale and atmosphere was fantastic and we all believed we were part of something special. Looking back, we probably were."



» Match the faces to score points. This is from the Spectrum version of the game.



» And here we have digitised Photofits from the 16-bit version of Ocean's hit game.



» The Amstrad version was brighter than its 8-bit peers but just as fun to play.



» Quite simply the best weapon in the game. It's short of ammo but causes huge amounts of damage to anything it touches.

"THEY WERE GREAT DAYS; GREAT PEOPLE, AND I BELIEVE THAT OCEAN WAS THE BEST PLACE IN THE INDUSTRY TO WORK BACK THEN" GARY BRACEY

» Damn bikers. Always causing trouble.


THANK YOU FOR YOUR CO-OPERATION

GARY BRACEY ON…

The game advertising the video and the video advertising the game: "This was a precedent we had started with *Platoon*. The movie companies soon got wise to the value of the 'real estate' on the video, but at the time it was incredible advertising for us."

The fact it was impossible to complete the drug factory level on the C64 without cheating: "Really? I honestly don't remember that. Oops."

That Ariston advert with the familiar music: "I did that deal myself, actually. The advertising agency rang up one day and said they wanted an electro-type 'hook' for a TV ad. One of their staff had been playing *RoboCop* on the Game Boy and thought it would be ideal. They offered us a few bob for it, so why not? Jon Dunn thought it was pretty cool! Oh, and it was actually the Game Boy version they used!"

PANG

WE'RE FOREVER BURSTING BUBBLES



- **PUBLISHER:** CAPCOM
- **RELEASED:** 1989
- **GENRE:** BURST-'EM-UP
- **FEATURED HARDWARE:** ARCADE
- **EXPECT TO PAY:** £50+ FOR JAMMA BOARD

HISTORY



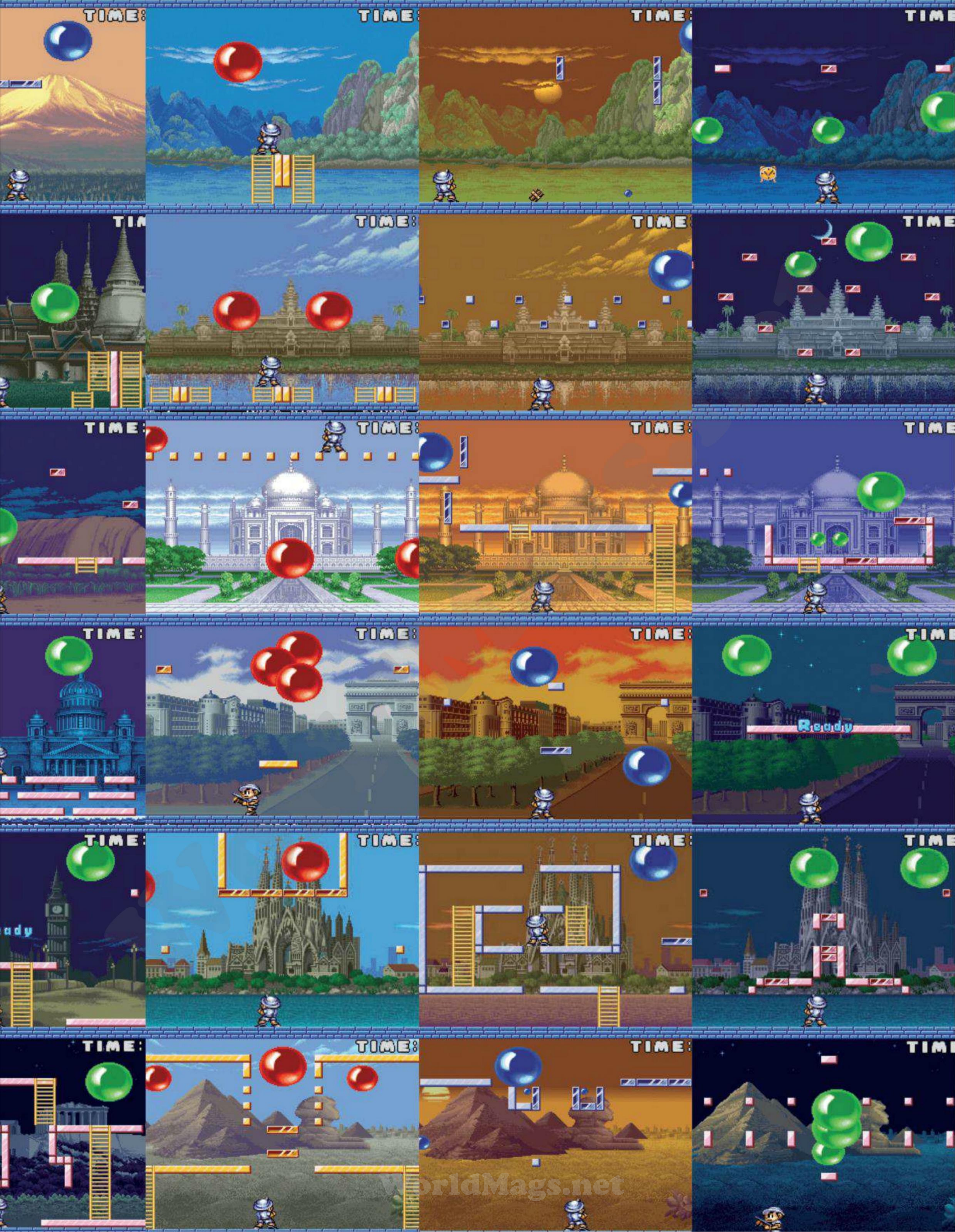
We all know it's good to play together. In the late-Eighties, Capcom usually encouraged us to kick the crap out of each other, but between the release of *Street Fighter* and its all-conquering sequel, it published this bouncy co-operative affair.

Of course Mitchell's *Pang* aka *Buster Bros* aka *Pomping World* (surely that should be '*Popping World*' or was there a fear that might make it sound like international erotica?) can be tackled alone, but it's far more fun to team up and blast your inflatable foes. Each hit sees the *Prisoner*-style bubbles splitting into ever smaller parts, bobbling against platforms and ladders, and threatening to flatten your little fellas, who, for some reason, have dressed up like retired majors on safari.

Strategies emerge as one player takes on a big blighter while the other hunts down a solitary bubble trapped in a corner. There are collective sighs of relief when someone picks up the clock that freezes time for a few precious seconds. Fingers are pointed at whoever thought igniting the dynamite was a good idea. Squabbles erupt when someone selfishly snaffles both protective force fields. Remember, if one of you dies, you both have to restart the screen. You're in this together.

Travelling across continents, taking in such sights as the Sphinx, Gaudi's dreamy La Sagrada Familia, the Acropolis in Athens and the mysterious carved heads of Easter Island, only increases this sense of it being a shared journey. And it's a trip that everyone can enjoy. I've watched expert Greg Mott set the current world record at the FunSpot arcade in New Hampshire (he kindly provided screenshots of every level for this piece, the big show-off), yet my seven-year-old daughter and I end most days with a linked-up game on our PSPs via *Capcom Puzzle World*.

The collection also contains the third in the series, *Pang 3* aka *Buster Buddies*, which has you blasting away against backdrops of great works of art from Van Gogh, Munch and the like. See, I told her mother I bought it to help with her homework…



TIME:
Ready

Year released: 1987 (Japan)

Original price: $200 (US TurboGrafx-16), $250 (US TurboDuo)

Buy it now for: £25-£30 loose (original white PC-Engine), £60-£100 (Duo)

Associated magazines: Turboforce, DuoWorld (US), Marukashi PCE, Gekkan PCE (Japan)

Why the PC-Engine was great… It was no bigger than a packet of crisps and played host to some truly awe-inspiring arcade conversions, as well as being responsible for some amazing technical innovations – it was the first home console to exploit the medium of CD-ROM, for example. A system with more hardware iterations than most people have had hot dinners, the convoluted PC-Engine family tree would give even the most ardent genealogist a serious headache, yet it remains close to the hearts of hardcore gamers worldwide thanks to its lustrous design and dazzling range of first-class software.

RETROINSPECTION

PC-ENGINE

INCREDIBLY SUCCESSFUL IN THE LAND OF THE RISING SUN AND A FIRM FAVOURITE WITH WESTERN IMPORTERS, NEC'S PC-ENGINE IS NOW 20 YEARS YOUNG. TO CELEBRATE THIS EVENT, DAMIEN MCFERRAN PULLS ON HIS BEST TIME-TRAVELLING TROUSERS AND FLINGS HIMSELF INTO A WORMHOLE, HOPING TO EMERGE UNSCATHED IN 1987...

Western gamers tend to consider Nintendo and Sega as the two major players in the 16-bit console war. On European and American soil this was certainly the case, with the Super Nintendo and Mega Drive battling it out for supremacy. The story was slightly different in Japan, however. Nintendo remained amazingly successful but it was NEC's PC-Engine that emerged as its main rival, leaving Sega to make do with a disappointing third.

Remarkably, this popular Japanese console struggled in the US and bypassed Europe altogether. Unravelling the complex lineage of this intriguing system isn't straightforward thanks to numerous hardware amendments, name changes and add-ons – not to mention the involvement of three different parent companies – but by thunder, we're going to try.

Back in the late-Eighties many companies – both inside and outside the videogame industry – observed the runaway success of Nintendo's NES/Famicom with mounting envy. One such corporation was Japanese electronics giant Nippon Electric Company, more commonly known as NEC. Established at the turn of the 20th Century to produce telephone components, NEC had gone on to become one of the world's leading computer manufacturers. A new conquest was beckoning in the form of the lucrative console market and while NEC undoubtedly had the financial clout to enter this arena, it lacked vital industry experience. Approaches were made to several leading videogame studios for support and it was soon discovered that Hudson Soft – the first developer to obtain a licence to develop for the Nintendo Famicom – also happened to be tentatively exploring the possibilities of producing its own system.

Founded by brothers Yuji and Hiroshi Kudo in 1973, Hudson didn't start out in the field of interactive entertainment. "They originally began by selling telecommunication devices and some art photographs," comments John Greiner, President of Hudson Entertainment in the US. "Within two years they began selling computer-related products and soon afterwards, the company started to make games. In fact, they were the first to publish a PC game in Japan." Hudson had created the high-powered LSI chipset but didn't possess the necessary cash to enter the console race alone. "They realised they needed a partner to manufacture and market to a large base. Fortuitous timing landed NEC as a company that was interested in entering the console market." This highly promising union would result in one of the most successful and influential Japanese consoles of all time.

SMALL IS BEAUTIFUL

In terms of aesthetics the PC-Engine must surely rank as one of the most iconic designs in the history of electronic entertainment. The original white system was

Trainspotting

Hudson founders Yuji and Hiroshi Kudo happen to be massive fans of locomotives, even going as far as to name their company after one. "The name was inspired by the Hudson train – a type of steam locomotive used primarily in America – which was a childhood favourite of the brothers," recollects John Greiner. "The train used to run through the Japanese town where the boys grew up. The year the company started, that train was decommissioned. After Hudson's financial success, the brothers bought the train and had it restored. It ran its route of yesteryear through their hometown and became a big tourist attraction. In fact, over the years, the Hudson train has become part of the Hudson company mythos. At one point, Hudson's research centre had a miniature rideable replica of the Hudson locomotive that ran through the building; and to this day, the front mantle of the Hudson train sits in the lobby of our main office in Sapporo."

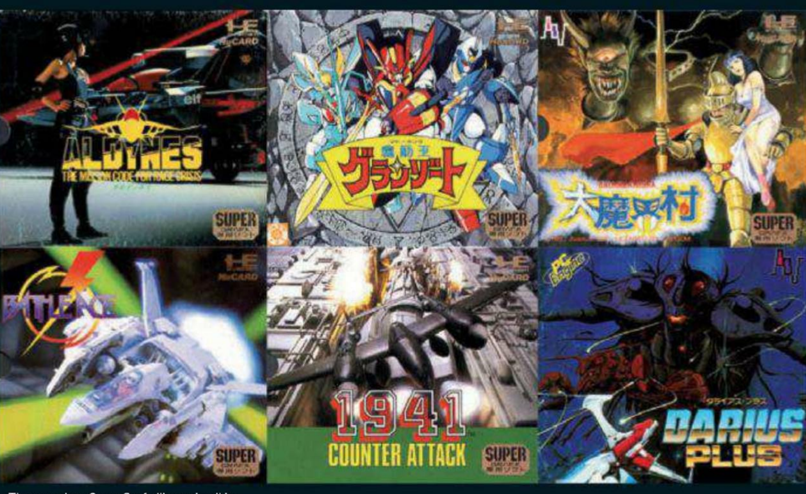


"WHILE NEC HAD THE FINANCIAL CLOUT TO ENTER THE CONSOLE ARENA, IT LACKED VITAL INDUSTRY EXPERIENCE"

RETROINSPECTION

PC-ENGINE





» The complete SuperGrafx library in all its glory. Superb ports of *Daimakaimura* and *1941* are balanced out by some truly dire original titles.



» SNK fans were happier than pigs in muck when the Arcade Card was released – these admirable ports made use of the increased RAM the card bestowed.

Greiner recalls: "The PC-Engine used a unique chip-on-board media instead of cartridges. These credit card sized HuCards, or Turbochips as they were called in America, were marvels in design. They were extremely durable, portable and cool."

The slender size of the machine belied the impressive technical specifications contained within. The custom-built dual 16-bit graphic processors (HuC6260 and HuC6270A) allowed the PC-Engine to display stunning arcade-quality visuals. Remarkably, the unique HuC6280A CPU that powered this minuscule wonder was 8-bit – a fact that would provoke many playground arguments about whether or not the machine should be classed in the same league as true 16-bit consoles like the SNES and Mega Drive.

NEC launched the PC-Engine in Japan on 30 October 1987 and by the end of the subsequent year it was the best-selling console in the country, dethroning the Famicom in spectacular fashion. One of the key reasons for this triumph was impressive third-party support, which previous consoles like Sega's Mark III (known as the Master System in the West) had struggled with, largely thanks to Nintendo's stranglehold over software developers. Striking technical specifications combined with the rampant enthusiasm shown by NEC and Hudson – two highly respected companies in Japan – encouraged many developers to support the console.

Namco, Irem, Masaya, Konami and Human all flocked to the PC-Engine banner, bringing some of their most treasured franchises with them. Amazingly, permission was also secured to port several highly esteemed Sega coin-ops, including *After Burner II*, *Power Drift*, *Space Harrier*, *Out Run*, *Wonderboy III* and *Fantasy Zone*. These were proficiently reprogrammed by internal studio NEC Avenue (later known as NEC Interchannel, and more recently Interchannel-Holon, as the company is no longer affiliated with NEC) and ironically they frequently outclassed Sega's own efforts on the Mega Drive.

With a successful launch out of the way, NEC soon set about creating what would be the first of many hardware updates: the 'CD-ROM2' add-on. "At the time, publishers were constrained by the cost and memory of carts," Greiner remembers. Released in 1988, the CD-ROM2 came with a fetching briefcase-style set-up and remains one of the most desirable pieces of PC-Engine paraphernalia for collectors. Early CD software was hampered by lack of RAM but this was thankfully rectified via a series of 'System Card' updates (which came in HuCard form and granted more usable memory). This in turn gave birth to the renowned 'Super CD' criterion, which allowed programmers to be more flamboyant and really put that additional CD storage space to meaningful use. "NEC and Hudson were driven by what a CD could bring to gaming: amazing sounds, robust animation, and seemingly unlimited storage space," confirms Greiner.

Commitment to largely unproven CD-ROM technology showed that NEC intended to remain on the cutting edge, but in 1989 this burning desire to innovate resulted in a near-fatal error of judgement.

petite and attractive, making rival consoles look positively ugly in comparison. "Hudson and NEC wanted to create a system that was appealing in design," Greiner continues. "The previous generation of consoles felt more like toys, so they wanted to create a system that was sleek yet powerful." With dimensions of 135 x 130 x 35mm, it remains the smallest home console ever made. This appeal was further augmented by the unique delivery system for software, as

"WITH A SUCCESSFUL LAUNCH OUT OF THE WAY, NEC SOON SET ABOUT CREATING WHAT WOULD BE THE FIRST OF MANY HARDWARE UPDATES: THE 'CD-ROM2' ADD-ON"



» John Greiner, president of Hudson Entertainment in the US.



» NEC reprogrammed several notable Sega coin-ops – some would argue that the PC-Engine versions eclipse the Mega Drive alternatives.



» Adverts like this one – taken from the pages of *C&VG* – helped whip up interest in the UK.

Despite the runaway success of the PC-Engine, Nintendo's Famicom remained the console to beat and when solid information regarding the specifications of its successor began to surface in the Japanese press, NEC panicked. It rashly decided to launch a new console and the SuperGrafx was born. Essentially a PC-Engine with additional graphic chips and four times as much RAM, this bulky machine was handicapped by the fact that it utilised the same 8-bit CPU as its older stable mate. Co-ordinating the extra chips created a massive drain on processing power and developers struggled to



» Not surprisingly, American box art was excruciatingly bad.



» Force feedback for your buttocks? The Virtual Cushion must rank as one of the most bizarre peripherals ever.

achieve satisfying results. Incredibly, only five dedicated games ever saw the light of day (in addition, a 'hybrid' version of *Darius Plus* was released that would also play on a standard PC-Engine). Thanks to an impressive conversion of Capcom's *Daimakaimura* (known to us as *Ghouls 'N Ghosts*) and excellent overall compatibility (it's able to play HuCard games and can be connected to the CD-ROM drive, making it the only machine in the PC-Engine dynasty with the potential to play all available software), the SuperGrafx remains a highly sought-after collector's item, regardless of its abject commercial failure.

GO WEST

In spite of this slight hiccup, success for the PC-Engine was virtually assured on home soil. With proven technology and a library of excellent games, it made perfect sense to unleash the console Stateside, as Greiner recalls: "The US market was stirred into a fevered state by fans wanting a true gaming upgrade from the 8-bit era." NEC's American arm rechristened the machine the 'TurboGrafx-16' and the external casing of the diminutive console was retooled in order to make it look more substantial and imposing. Nevertheless, the fortunes of the TurboGrafx-16 stood in stark contrast to that of its Japanese sibling. "The success of the PC-Engine was undeniable in Japan, where at one point it captured nearly a third of the market," states Greiner. "In the US however, it was a different story." Sega released the Mega Drive (renamed 'The Genesis') in North America at almost exactly the same time and began relentlessly and ruthlessly marketing its new console, as Greiner remembers: "Sega were hard-hitting, gaining an irreverent edge which best suited the US demographics." The early promotions for the Genesis were extraordinarily successful and the selection of available software – which not only included some of Sega's key arcade titles but was also more tailored to a Western audience – gave it the edge.

NEC's machine was lumbered with a very 'Eastern' assortment of games and Hudson struggled to craft titles that would appeal to US players. "It was a tremendous challenge launching so many games in such a short time frame," recalls Greiner. "That is why you initially saw so many games that were ported from Japan and from genres that were most popular in that country, like shooters." Nintendo's dominance over third-party developers became apparent once again, with American software companies being just as fearful of Nintendo's wrath as their Japanese counterparts. "Unfortunately,


» Owning a PC-Engine LT grants you access to the elite of collectors – the machine is rare and very expensive. You only need one kidney, after all.


» NEC envisaged a wide range of applications for its 8-bit wonder – sadly, most of these ideas were canned as it became clear that gaming was the future of the PC-Engine.

Go Johnny, Go, Go, Go

To support the release of the TurboDuo, TTI commissioned a series of adverts featuring a freelance crime fighter named Johnny Turbo. Dedicated to defeating the nefarious forces of the malevolent Feka Corporation, Johnny used his special powers to educate the gaming populace of America about justice and truth – the truth being that the Feka system was not a dedicated 'all-in-one' CD system, like TTI's TurboDuo. The adverts were shoddily concealed attacks at Sega, who had just released the Sega CD add-on for the Genesis. While Sega's promotional campaign was cool and original, the Johnny Turbo adverts were notoriously cheap and ever so slightly petty – the key issue being that Sega had never actually insinuated that the Sega CD could function without the Genesis. They have since become part of videogame folklore, with many gamers ironically remembering the adverts better than the product they ham-fistedly tried to promote.



"NEC'S MACHINE WAS LUMBERED WITH A VERY 'EASTERN' ASSORTMENT OF GAMES AND HUDSON STRUGGLED TO CRAFT TITLES THAT WOULD APPEAL TO US PLAYERS"

PC-ENGINE

"IN JAPAN, THE AMAZING SUCCESS OF THE FRESHLY RELEASED SUPER FAMICOM PROVOKED NEC TO CONSOLIDATE THE EXISTING PC-ENGINE HARDWARE IN THE FORM OF THE DUO SYSTEM"

Hardware History

Few machines can boast as many hardware upgrades as the PC-Engine. From 1987 to 1994 NEC produced a massive range of systems based on the '87 technology. The original white console was restyled slightly in 1989 to create the CoreGrafx – technically identical but with AV output instead of RF (the CoreGrafx II followed in 1991 but was only cosmetically different from its predecessor). The same year saw the release of the 'Shuttle', which boasted a gimmicky design but bizarrely lacked the ability to connect to the CD-ROM2. The CD-ROM2 and Super CD-ROM2 add-ons allowed users to play cutting-edge CD titles, and the portable PC-Engine GT and LT bestowed a modicum of mobility. The 'Duo' system also saw hardware revisions, the first being the Duo-R (1993) that had a different case and more streamlined components. The Duo-RX (1994) proved to be the final throw of the PC-Engine dice and was identical to the Duo-R, save for the bundled six-button joypad.

ESSENTIAL WEBSITES

www.pcengine.co.uk
www.pcenginefx.com
www.tzd.com
www.turbomemoirs.com

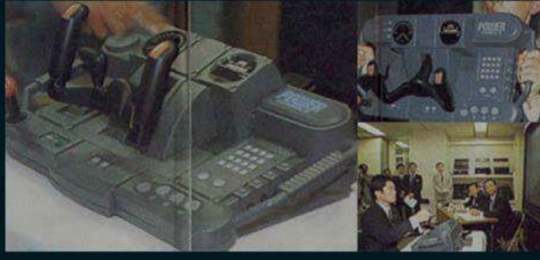


» NEC Avenue's *Space Fantasy Zone* looked promising but sadly never saw release. Thankfully a working ROM exists.

while Hudson created many great games for the system initially, it still wasn't enough. Many of the big name brands from other publishers simply couldn't be published," continues Greiner. In a similar situation to that witnessed in Japan, Nintendo stipulated that if a third-party game was produced for the NES, it couldn't be released on a rival console. "That became a challenge that was not easily overcome," Greiner reflects, mournfully. Nintendo's bullying tactics were later found to violate US anti-trust laws but by then it was too late.

To make matters worse, NEC vastly overproduced its hardware. "They listened closely to retailers, who were very aggressive in their belief that 16-bit gaming was going to be a big success," explains Greiner. "NEC therefore over-ordered units and this proved fatal in the long run as they committed tremendous financial resources to create the hardware, which ultimately handcuffed them in marketing spend. Sega were able to successfully steal market share away with a 'bad-ass' image and an unfettered marketing bankroll."

The seemingly unbridled success experienced in Japan had sadly eluded NEC in America. "Arguably, the TurboGrafx-16 had better games, but a number of missteps took place when it came to hardware styling, box art, pack-in and release schedule," comments



» Predating the Xbox *Steel Battalion* controller by over a decade, the monstrous SuperGrafx 'Power Console' featured full steering yoke, gear stick, throttle and numeric keypad. The SuperGrafx slotted in the back of this fearsome beast. It never got past the prototype stage.

Greiner. "Marketing and understanding the US gamer mentality was always a challenge for NEC."

Around this time there were faint rumblings of a European release for the PC-Engine. Early in 1990 it was revealed that a UK company called Mention were intending to sell specially modified machines that would circumvent the various problems UK importers were experiencing. Known as the PC-Engine Plus, this slightly altered system did not have the official blessing of NEC and not surprisingly never took off. Despite several magazines reporting that NEC themselves were 'literally months away' from officially launching the console in the UK for 'under £100', it never happened. "Europe was neglected as this was NEC's first foray into the console market," comments Greiner. "However, there was considerable grey market penetration as Europeans also wanted to participate in the new gaming revolution."

THE DYNAMIC DUO

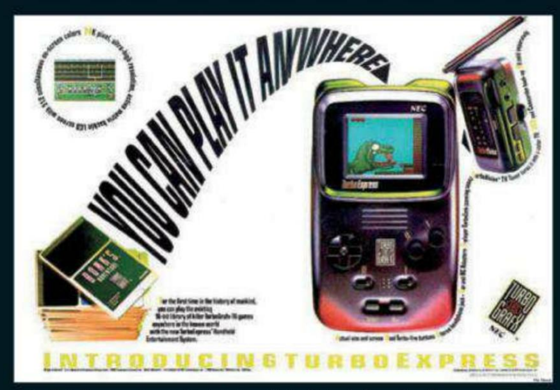
Back in Japan, the amazing success of the freshly released Super Famicom provoked NEC to consolidate the existing PC-Engine hardware in the form of the Duo system. As you might expect from the snappy moniker, this was a PC-Engine and CD-ROM drive combined. The need for (easily misplaced) System Cards was also negated as the Duo had the necessary RAM built in. Launched in 1991, the machine arguably represented the zenith of the PC-Engine brand. A US release followed via the newly founded Hudson/NEC venture Turbo Technologies Incorporated (TTI for short), but the rebranded TurboDuo suffered the same ignominious fate as the TurboGrafx-16 before it – despite having some excellent software, it failed to gain a significant market share and faded quickly. Incredibly, it's recently been confirmed by a former TTI employee on fan site



» The CD-ROM2 add-on came with its own briefcase to house it and the console – here a CoreGrafx II version.



» The legendary 'HuCard' was similar to Sega's 'MyCard' format for the Mark III console.



» The TurboExpress attempted to do battle with the Nintendo Game Boy. The screen was excellent and it could play HuCard software, but poor battery life and a high price point rendered it uncompetitive.

www.pcenginefx.com that the company was offered exclusive home console rights to Midway's arcade hit *Mortal Kombat*, but the head office in Japan decreed that fighting games were oversubscribed in the US and neglected the offer.

The success of the Japanese Duo allowed NEC to further strengthen its position, applying intense pressure on Nintendo with a series of excellent titles whilst keeping poor old Sega firmly in third place. Classic games like *Dracula X*, *Gate Of Thunder*, *Star Parodia* and *The Legend Of Xanadu* proved that even in the relative infancy of the CD-ROM age, the extra space afforded by the format could be put to sterling use. Fortunately, the humble HuCard was not forgotten and a noteworthy conversion of Capcom's *Street Fighter II: Champion Edition* pushed the maximum capacity of the credit card-sized format up to a muscular 20 megabits.

1994 saw the introduction of the Japanese-only 'Arcade Card', which increased the PC-Engine's power to previously unimaginable levels. Slick coin-op conversions of *Fatal Fury Special*, *World Heroes 2* and *Art Of Fighting* soon appeared and while these incredibly faithful ports won the console a whole new group of admirers, they came too late to make a truly telling impact. The 16-bit party, which the 8-bit PC-Engine had skilfully managed to gatecrash, was beginning to wind down and a new wave of powerful 32-bit behemoths loomed ominously on the horizon. Sales started to dwindle, forcing NEC and Hudson to develop a successor – the ill-fated 32-bit PC-FX. Built around the rather misguided belief that FMV-style games represented the future of the console industry, it came as no surprise when it flopped at retail.

After nearly a decade of unwavering commitment to one another, NEC and Hudson finally parted company in the middle of the Nineties. The former went on to supply the graphical muscle behind Sega's Dreamcast and the latter continued to produce games for a wide range of consoles.



» The PC-Engine Shuttle ranks as one of the more unusual – some might say pointless – hardware modifications made available.

SPECIAL THANKS TO John Greiner and John Lee of Hudson Entertainment for taking part in this feature and Aaron Nanto of www.pcenginefx.com for providing exclusive hardware photos.

INTERVIEW WITH KEN WIRT



To get a better idea of the problems faced by NEC when it came to launching the TurboGrafx-16 in the US, we spoke exclusively to one of the key people behind the operation. Ken Wirt served as vice president and general manager of the TurboGrafx-16 Group at NEC Home Electronics from 1989 to 1991 and was responsible for many of the decisions made in regards to releasing the system in America.

When were you made aware that NEC intended to release the PC-Engine in the US?
Almost right after I started at NEC as vice president of strategic planning, NEC released the PC-Engine in Japan and it did quite well there. Then in the fall that year there was a request to bring the machine to the United States. So from that time it took us about a year and a half in order to be able to do that.

What factors influenced the name change to 'TurboGrafx-16' and why was the tiny PC-Engine redesigned as a larger machine for the US?
Well, I think you have to go back to the time period – this was the early-Nineties. Prior to the launch we did some market research with customers in the US and we found that the name PC-Engine caused quite a bit of confusion. I think in Japan the name was okay because it's kind of an American phrase and that had some cachet. In the US, PC-Engine was literally interpreted by customers as Personal Computer Engine. In regards to the restyled shape of the machine, it was going to be sold at a relatively high price and the customers we asked questioned why something so expensive should be in such a small package. They believed that if it's small it should cost less, not more. Of course today in the 21st Century we understand that smaller things sometimes cost more and you pay a premium for that advantage. The name change came about because we tested a number of different options and the one that did the best was the one that described the main benefit of the product, which was the graphics. Hence the name: TurboGrafx-16. The 16 related to the 16-bit graphic chips inside the machine.

How did you market the machine?
In terms of marketing of the product we knew it was a little more expensive because of the technology – quite a bit more expensive than what people had been used to paying for game machines, in fact. We also knew that we had peripherals coming out in the future such as the portable version – The TurboExpress (PC-Engine GT in Japan) – and the CD-ROM drive that would be really quite expensive. So what we attempted to do was to position it as a high-end gaming machine for the kind of customers that had maybe grown up with the NES and were graduating to a more advanced system. Because these kids were older they would feel like they could spend more money on it. It wasn't like today though, where there's a real adult market for gaming. We viewed this as kind of the older teenager crowd, so Nintendo was for people below the age of 16 and we're trying to go for 16 to 22, sort of when you graduate college, as the target market for TurboGrafx-16.

How did NEC view the rapidly emerging Sega?
We certainly had our eye on Sega. In Japan the PCE had a big advantage over the Sega Genesis because it was out about a year before. In the US I believe the TurboGrafx-16 and Genesis launched within about ten days of each so there was no year-long advantage. In the US we knew that Sega would have strong software because they were developing games themselves. They also had experience in the US market with their Master System and they had licensed games, too, so we knew they would be a force to contend with. We were actually more concerned about Sega than we were about Nintendo. Sega was very focused on licensing and they had *Joe Montana Football* and that was a great game on the Genesis. The games that were on TurboGrafx-16 typically did not have licences. We tried to get some but needed to go back to Japan for approval and in those days licensing did not play a big role in the success of the product in Japan. We had a tennis game that was pretty good but we wanted to get a tennis star to put their name on the game, so we worked out a deal with Pete Sampras. This is before he won any major tournaments, but we could tell he was an 'up and comer' as he'd just won the national championship for juniors. We drafted out a deal for him to be the star in our tennis game for $25,000. Ironically we couldn't get approval from Japan, not because of the amount of money involved but because they didn't believe in licensing. So we had *TV Sports Tennis* instead of *Pete Sampras Tennis*.

What are your memories of the US launch?
We launched it with some commercials that turned out to be quite controversial. The first set of TV ads tried to capture the excitement and speed that TurboGrafx-16 delivered. One of them showed a teenager playing TurboGrafx-16 alongside a goldfish bowl and when the teen began playing, the fish started swimming faster and faster. Bubbles started to appear, like the bowl was heating up, and the fish eventually jumped out because it was so hot. We had a similar one with cats – they also got very animated by the TurboGrafx-16 and were bouncing off the walls. This generated a fair amount of controversy among animal activists who thought that we were harming animals – in fact it was all done with computer graphics, which was much less common back then than it is now. Today people would probably guess it was CGI, but back then they wrongly assumed we were actually boiling the water with the fish in it, which I can assure you we did not do! Anyway, there were enough complaints directed to Toys 'R' Us management that they made a strong request that we pull those commercials, which we eventually did.

Another interesting anecdote involves a game from Japan called *PC Kid*, which featured a character who would go around and hit things with his head. In the US, a slang term for hitting something is to 'bonk' it, so we renamed the game *Bonk's Adventure*. Of course in England to 'bonk' means something entirely different, so our advertising campaign for this title got a lot of attention in Europe. We even had a commercial campaign in the US with the slogan 'Bonk for President' and that was printed on T-shirts and other marketing materials. I think if eBay had existed at that time you would have seen a lot of sales in the UK for those shirts!

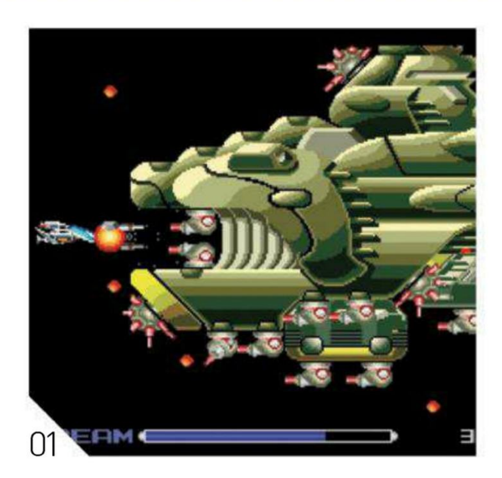
The TurboGrafx-16 struggled against Sega and Nintendo. What steps were taken to rectify this situation when the TurboDuo was launched?
After a period of time we realised that there was a major cultural difference between the US and Japan that impacted the financial nature of the business. In Japan children get money for gifts, typically at New Year's time. It's their money and they can spend it however they want to. So if you have a very expensive games system, that's okay – if the kids want it and they have enough money, they'll buy it. In the US, of course, it's a very different dynamic. Kids still get presents around Christmas time but the parents buy the presents. Parents are very hesitant to spend a big amount on videogame systems, so we had a much tougher time selling the high-priced technology to parents in the US than selling the same thing to children in Japan. As a result we had to lower the price of the product and that put a lot of margin pressure on it. Because of the way the business was structured – with Hudson manufacturing the HuCards, sending them to NEC who then shipped them onto the US – there were mark-ups at each stage. It made the product too expensive. So to simplify the business model and reduce the cost to the consumers in the US, TTI was created. It basically let Hudson – the majority owner of TTI – manufacture the cards and sell them in the US at a lower price, which increased the volume and made the business healthier.



PC-ENGINE

PERFECT TEN GAMES

With so many marvellous HuCard and CD-ROM titles available, it's hard to pick ten 'essential' games. The pieces of software we've complied here show just how varied a library the PC-Engine possesses.



01

R-TYPE

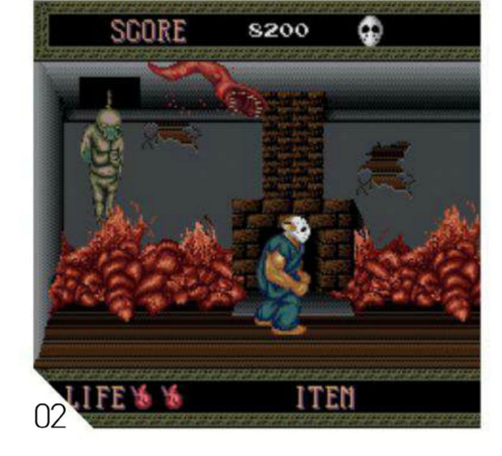
» **RELEASED:** 1988
» **PUBLISHED BY:** HUDSON
» **CREATED BY:** HUDSON/IREM
» **BY THE SAME DEVELOPER:** LEGEND OF HERO TONMA

01 Irem's legendary horizontal shooter is widely regarded as one of the PC-Engine's most accomplished conversions and is credited with being something of a 'killer app' in the early years of the machine. Astoundingly accurate in terms of graphics, sound and gameplay, the only drawback is that it had to be split in two parts as it wouldn't all fit on one HuCard – so the PC-Engine *R-Type II* isn't actually a sequel as you might imagine, but the final levels of the game. A CD-ROM release set things straight and put everything on one disc, but collectors will want to seek out the dual HuCard editions for their attractive packaging.

SPLATTERHOUSE

» **RELEASED:** 1990
» **PUBLISHED BY:** NAMCO
» **CREATED BY:** NAMCO
» **BY THE SAME DEVELOPER:** GALAGA '88

02 Although it's inferior to the superb FM Towns Marty conversion, this commendable port remains a fantastic replica of the gloriously gory coin-op. It's so close to the original that you really have to run them in tandem to spot the differences. Supremely playable to boot, the Japanese version continues to command respectable (but not extortionate) prices on the open market. The American TurboGrafx-16 edition, which was sadly censored upon release, is less desirable. Unfortunately it's this version that has recently been released in the US and Europe on Nintendo's Wii-based Virtual Console service. Boo.



02



GEKISHA BOY/ PHOTO BOY

» **RELEASED:** 1992
» **PUBLISHED BY:** IREM
» **CREATED BY:** IREM
» **BY THE SAME DEVELOPER:** IMAGE FIGHT

03 This is easily one of the most novel and innovative PC-Engine titles. Photo Boy is a budding paparazzo tasked with taking compelling shots throughout several different environments. Using the on-screen cross hair, you must take snaps of various objects and events whilst avoiding obstacles along the way. Graphically this is one of the most attractive titles available, packed with colour, detail and stacks of personality. Sadly, like many must-have PC-Engine games, it's worth a pretty penny these days. An updated version exists for the PS2 and was released in the West as *Polaroid Pete*.

DRACULA-X – RONDO OF BLOOD (CD)

» **RELEASED:** 1993
» **PUBLISHED BY:** KONAMI
» **CREATED BY:** KONAMI
» **BY THE SAME DEVELOPER:** DETANA! TWIN BEE

04 Grill any hardcore *Castlevania* fan on their favourite instalment and they'll most likely say *Symphony Of The Night*. Press them a little harder and they may also mention *Rondo Of Blood*. Boasting stunning graphics, impressive anime cut-scenes and an excellent musical score, it's a game no self-respecting PC-Engine owner should be without. Unfortunately, its lofty reputation keeps second-hand prices exceptionally high (around £100). PSP update *Dracula X Chronicles* is now out.

STREET FIGHTER II DASH – CHAMPION EDITION

» **RELEASED:** 1993
» **PUBLISHED BY:** NEC
» **CREATED BY:** NEC/CAPCOM
» **BY THE SAME DEVELOPER:** FIGHTING STREET (CD)

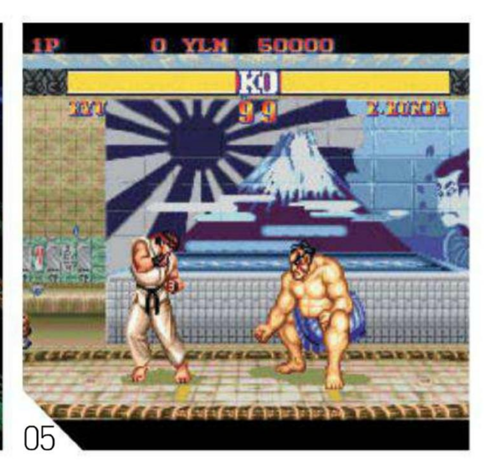
05 Most gamers know the superlative SNES instalment of this classic brawler. The fact the PC-Engine conversion is as good (if not better) is testament to the power of NEC's machine. Visually, it's hard to distinguish it from the SNES version and the sampled sound is better. It cries out for a six-button pad and multi-tap (sadly the PC-Engine only has one joystick port). It's hard to believe that an 8-bit console is capable of such an accurate conversion. Second-hand copies aren't too steep either.



03



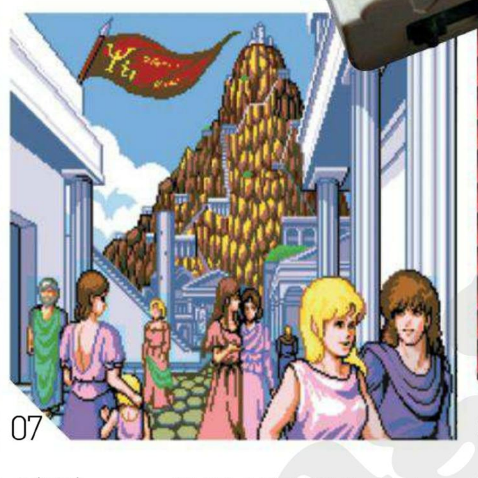
04



05




06


07


08

PC KID/BONK'S ADVENTURE

- » **RELEASED:** 1989 (JAPAN)
- » **PUBLISHED BY:** HUDSON
- » **CREATED BY:** RED/ATLUS
- » **BY THE SAME DEVELOPER:** GATE OF THUNDER

06 **Sega had Sonic. Nintendo had Mario. NEC had PC Kid, or Bonk as he was known in the US.** A cave boy with a penchant for head-butting things, PC Kid became a firm favourite with gamers worldwide, though not quite as famous as Sonic or Mario. Two incredibly successful sequels followed as well as a futuristic shooter spin-off called *PC Denjin* (*Air Zonk* in the US). Interestingly, the failure of the TurboGrafx in the US meant that Hudson continued to support Nintendo's hardware, so PC Kid also appeared on the rival NES, SNES and Game Boy. The turncoat.

YS BOOK I & II (CD)

- » **RELEASED:** 1989 (JAPAN)
- » **PUBLISHED BY:** HUDSON
- » **CREATED BY:** NIHON FALCOM
- » **BY THE SAME DEVELOPER:** DRAGON SLAYER

07 **The large amount of text to translate and general consumer apathy towards the TurboDuo meant that very few of the brilliant Japanese RPGs created for the machine ever made it to Western shores.** Thankfully, those that did were of a very high quality and *Ys I & II* arguably ranks as the most impressive of the bunch. While it's not the prettiest game you're ever likely to play, the atmosphere, storyline and soundtrack are second to none. Amazingly the Western script and voice acting are both first-class, which rather goes against the grain of the time. This CD-ROM release remains massively engaging and highly recommended.

SEIREI SENSHI SPRIGGAN (CD)

- » **RELEASED:** 1991
- » **PUBLISHED BY:** NAXAT SOFT
- » **CREATED BY:** COMPILE
- » **BY THE SAME DEVELOPER:** ALESTE

08 **Software studio Compile sadly no longer exists, but has left a striking legacy – including this awesome Super CD blaster.** A close relative to the equally brilliant Mega Drive *MUSHA Aleste* and Mega CD *Dennin Aleste* (*Robo Aleste* in the UK and US), this mecha-based vertically scrolling shoot-'em-up is as slick as they come. Blisteringly fast and packed to bursting point with stupefying detail, *Spriggan* qualifies as an essential (albeit expensive) purchase. It's worth noting that the sequel, *Spriggan Mk2*, wasn't programmed by Compile and isn't a patch on the original, despite some nice visuals.


09

GOMOLA SPEED

- » **RELEASED:** 1990
- » **PUBLISHED BY:** UPL
- » **CREATED BY:** UPL
- » **BY THE SAME DEVELOPER:** ATOMIC ROBOKID

09 **It's difficult to adequately describe this quirky little videogame, as there really hasn't been anything quite like it before or since.** You control a caterpillar-like creature, which has to encircle food in order to exit each level. Enemies are also dispatched by surrounding them, and can be stunned temporality with bombs. *Gomola Speed* is definitely one of the truly essential pieces of PC-Engine software and can thankfully be picked up for less than a fiver these days. It's rumoured that the team behind the game were head-hunted by Nintendo soon after it was published, which is hardly surprising. A truly superb title that mixed strategy and puzzle elements to great effect.

BOMBERMAN '94

- » **RELEASED:** 1993
- » **PUBLISHED BY:** HUDSON
- » **CREATED BY:** HUDSON
- » **BY THE SAME DEVELOPER:** BOMBERMAN '93

10 **It simply wouldn't be sporting to discuss the best games of the PC-Engine without mentioning what is arguably Hudson's most famous creation.** Bomberman has appeared in several games on NEC's 8-bit machine and while all are excellent (with the possible exception of *Panic Bomber*, which was a fairly lacklustre puzzler), this edition is the most accomplished of the bunch. The traditional explosive-related malarkey is all present and correct, but here we also see the introduction of innovations such as animal steeds and new characters for the near-essential multiplayer mode. It was ported to Sega's Mega Drive under the highly original name *Mega Bomberman* in 1994.



10



PC-ENGINE and the rest...

It may be a shoot-'em-up fan's dream machine, but there are still plenty of great games available for NEC's miniature wonder that cover a variety of different genres. Here's a selection of the very best and worst that the machine has to offer.

01 RANMA 1/2
02 FINAL SOLDIER
03 THUNDER BLADE
04 AERO BLASTERS
05 F1-PILOT
06 OUT RUN
07 WALLABY
08 KIKI KAI KAI
09 ALIEN CRUSH
10 KLAX
11 SKWEEK
12 WORLD COURT
13 HATRIS
14 MAGICAL CHASE
15 BLUE BLINK
16 DIE HARD
17 MOTO ROADER
18 SOLDIER BLADE
19 KYUKYOKU TIGER
20 CHAN & CHAN
21 GUNBOAT
22 PC KID
23 THE KUNG FU
24 LEGENDARY AXE
25 ALTERED BEAST
26 BLOODY WOLF
27 DUNGEON EXPLORER
28 GUNHED
29 THE NEW ZEALAND STORY
30 CORYOON
31 SPLATTERHOUSE
32 PRINCE OF PERSIA
33 WORLD JOCKEY
34 1943 KAI
35 BARI BARI LEGEND
36 DRAGON SPIRIT
37 GOMOLA SPEED
38 ADVENTURE ISLAND
39 JACKIE CHAN
40 BOMBER MAN '94
41 GALAGA '88
42 RABIO LEPUS SPECIAL
43 SHANGHAI
44 BATTLE LODE RUNNER
45 DEVIL CRASH
46 RAIDEN
47 CIRCUS LIDO
48 FANTASY ZONE
49 KNIGHT RIDER SPECIAL
50 NINJA WARRIORS
51 RASTAN SAGA II
52 MR HELI
53 POPULOUS
54 WONDER MOMO
55 SHINOBI
56 BATMAN
57 F1-CIRCUS '91
58 DON DOKO DON
59 OPERATION WOLF
60 FINAL MATCH TENNIS
61 TWIN BEE
62 SUPER ADVENTURE ISLAND
63 PARODIUS
64 TIME CRUISE
65 VICTORY RUN
66 PARASOL STARS
67 BIKKURI MAN WORLD
68 IMAGE FIGHT
69 R-TYPE
70 NINJA SPIRIT
71 TRICKY
72 BATTLE ACE
73 SPACE HARRIER
74 TV SPORTS BASKETBALL
75 AFTER BURNER II
76 MAKAI PRINCE DORABA CHAN
77 SALAMANDER
78 PC KID 2
79 YU YU JINSEI
80 POWER DRIFT
81 VIGILANTE
82 HANATA KADAKA
83 STREET FIGHTER II: CHAMPIONSHIP EDITION
84 PAC-LAND
85 ZIPANG
86 SCHBIBIN MAN 3
87 PUZZNIC



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19200
68 69
NINJAS
PIRATES
2:54
74
75
76
77 78
83
84
85
86 87
PLAYER-1
HIGH SCORE
LEVEL 1
TIME
1'01"



The Definitive Contra

"I IDENTIFY VERY PERSONALLY WITH THIS GAME, BECAUSE LOTS OF PEOPLE CALL ME A CONTRA ALL THE TIME," SAYS STUART CAMPBELL, ON THE WAY TO THE DOCTOR'S TO GET HIS EARS SYRINGED

The purpose of The Definitive is to lay a cool, soothing hand on the fevered brow of poor confused game series, and if you're looking for a videogame mixed-up kid you'd be hard-pushed to find a bigger basket case than *Contra*. Even the very first game in the series had three different names, three different sets of characters and two different settings, and it only got messier from there. The homeports had different names to their arcade parents, extra stages, different level layouts and (depending on which country they were released in) robots instead of *Rambo*-type mercenaries as the stars. Even releases within the same country, but on different formats, got different versions of the game with different names and protagonists. And lordy, don't even get us started on the storyline.

Even the gameplay in *Contra* is schizophrenic, taking place from three different perspectives (side-scrolling, vertical-scrolling, and into-the-screen 3D – and in later games, overhead view too), but despite all of this it kick-started and defined a gamestyle that would go on to include some of the most loved videogames ever. From the Spectrum's wonderful *Cobra* to the arcade's *Metal Slug* series to *Gunstar Heroes* on the Mega Drive and perhaps the genre's highpoint, the toweringly fantastic *Gunner's Heaven* on PSone, every running, jumping, shooting platformer owes a debt to *Contra*. Or *Gryzor*. Or *Probotector*. Or whatever the hell it is. Hey, look over there! The feature's starting!

1987
CONTRA AKA GRYZOR AKA PROBOTECTOR (ARCADE/NES)

The original coin-op starred two hunky dudes (modelled after Arnold Schwarzenegger and Sylvester Stallone) going by the splendid names of Bill Rizer and Lance Bean (unless you're reading the manual of the US NES game, in which case they're Mad Dog and Scorpion), battling fearsome alien enemies on a remote island just off New Zealand in the year 2633 (or, in the American NES game, in South America in 1988). It was ported to the US NES under its original name of *Contra* (in the late-Eighties the word carried political connotations less popular in Europe, hence the coin-op's alternative title and the US game's changed setting), but had substantial changes to the arcade original. Levels have different layouts (eg the first stage has two exploding bridges instead of one), and on the NES the arcade's long final level is broken up into multiple and expanded individual stages. The US and Japanese versions were created by different teams using different "mappers" of the NES hardware, and are therefore substantially different. The Japanese port – which took the European arcade title of *Gryzor* – has map screens, extra cut-scenes and animations (check out the swaying palm trees on level 1, for example) not seen in the US game. European NES owners had to wait until 1990 for their release, which was of course the inferior US version, but concerns over Germany's stringent laws about violence against human characters in videogames saw the macho characters and some of the enemies replaced with robots and the game's title changed again, this time to *Probotector*. The *Probotector* name would stay with European incarnations of the series right up to the PS2 era, when it became *Contra* everywhere.

PLAY IT NOW ON: There was a PS2 budget port of the original *Gryzor* in Japan (oddly using the *Contra* title), or you could try the (slightly) graphically enhanced Xbox Live Arcade port for the 360, though it's fairly horrible with the 360's rubbish D-pad. Failing that, obviously it's MAME time.

» Full-on two-man action, of the sort this feature's going to almost completely ignore.

1987/8
GRYZOR (SPECTRUM, C64, CPC)

The home-computer versions of *Gryzor* by Ocean are worth a communal separate entry, because they bear little practical resemblance to either the arcade original or each other, all three having different level layouts as well as fundamental gameplay changes. On the Amstrad the display flicks half a screen at a time instead of scrolling and it's almost impossible to duck without jumping down a level (you have to hold down fire first, which freezes your position and will generally get you killed). On the much cruder-looking C64 version you can race to the end of the first level in 13 seconds flat, but you can't assign "jump" to the joystick or any other controls to the keyboard, so you have to put the computer on the floor and jump with your foot. On the Speccy you can't move backwards, you can't shoot downwards while jumping (something common to all three 8-bit ports), and you can neither jump nor duck while in the water (the coin-op only stopped you jumping), making it a lethal death-trap (another feature shared with the CBM and CPC). On the other hand, unlike the other two versions, the Speccy's level 1 bridge doesn't explode and the fortress at the end of the first stage doesn't fire at you at all, which balances things out a bit. Despite such concessions, all three versions are insanely difficult, and with no continues allowed you'll need to be superhuman to even get to the end of level 2 in any of them.

PLAY IT NOW ON: EmuZWin is the best free Spectrum emulator, WinVICE does a great job of all the Commodore micros, and CaPriCe (look, don't blame us for the punctuation here, okay?) is a splendid and easy-to-use Amstrad emu.



» The Speccy version does at least look rather spiffy.



» The sequel has overhead stages, but no 3D or vertically scrolling ones.

1988
SUPER CONTRA AKA PROBOTECTOR 2 (ARCADE, NES)

Curiously, *Contra* only ever got one arcade sequel (unless you count the port of the SNES game to the SNES-on-a-PCB Nintendo Super System, which is frankly cheating). *Super Contra* saw the first appearance in the series of overhead levels and the smart bomb (here called "shells"). Unusually you start with none of these all-obliterating superweapons, and they can only be found/used in the overhead stages. As with the first game, the NES port (known as *Probotector 2 – Return Of The Evil Forces* in PAL territories) takes place in the same graphical settings as the coin-op, but with mostly different actual level layouts, and there's no smart bomb in the NES game.

PLAY IT NOW ON: *Super Contra* is now available on Xbox Live Arcade.

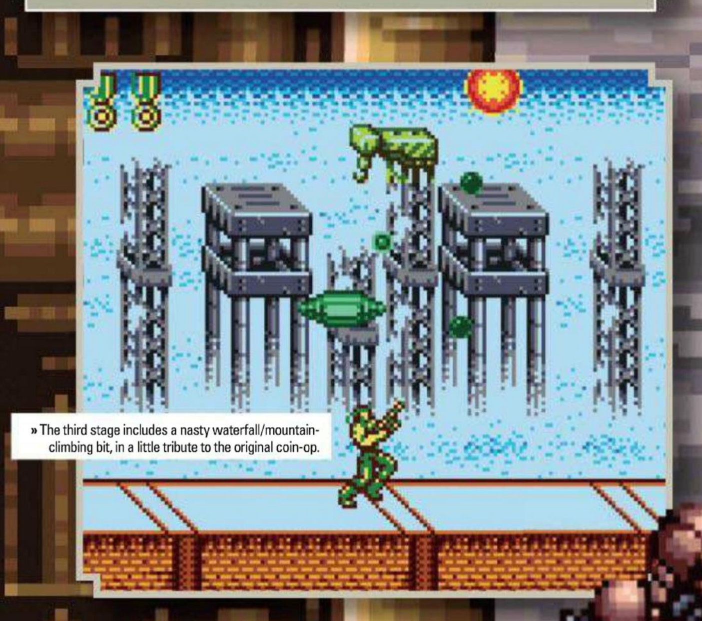
1989
GRYZOR AKA CONTRA (MSX2)

The "port" of the original coin-op to the MSX2 (and the last release to carry the "*Gryzor*" name) was to all intents and purposes an entirely different game, and radically dissimilar to the other 8-bit micro conversions, too. While the settings were basically the same, the levels were completely new, and were presented in flick-screen form rather than scrolling, effectively making the game a series of separate single-screen "levels" within each stage. (It also made the vertical stages much easier, since you could no longer die by falling off the bottom of the screen). The difficulty was further reduced with the inclusion of a sizeable energy bar, which could survive several hits and was replenished after each stage, and by the fact that there were almost never more than two enemy soldiers on screen at once. There were new power-ups (eg a useful rear-firing shot), and on collecting one the game paused and let you select which of the weapons from your armoury you wanted to use. And just to complete the befuddlement of the poor *Contra* fan, you could now jump in the water but NOT duck.

PLAY IT NOW ON: The excellent MSX emu BlueMSX.



» This is "Homicide Censor No 2", the splendidly named second 'boss' installation.


» The third stage includes a nasty waterfall/mountain-climbing bit, in a little tribute to the original coin-op.

1991
CONTRA AKA PROBOTECTOR AKA OPERATION C (GAME BOY)

Loosely based on *Super Contra* (the level settings are again the same, but the layouts are even more radically different to the NES version – the helicopter gunship boss of the first stage, for example, is replaced with a giant submarine), GB *Contra* was one of the handheld's most popular early releases, and for good reason. Giving the player the auto-firing machine gun from the off, and introducing new weapon upgrades like the homing shot, *Operation C* is a rip-roaring fire fight from start to finish, and while it's by no means easy it's rather less unfairly hard than its arcade dad and NES big brother. The original Japanese release also lets you tackle the first four levels (of five) in any order you like – a common feature in Japanese Konami GB games at the time – whereas the European one (confusingly titled *Probotector* although it's most closely related to *Probotector 2*) and the US version (*Operation C*) don't.

And just in case the naming continuity wasn't already enough of a mess, in 1999 Konami released a European compilation of GB games for GBC, entitled "*Konami GB Collection Vol. 1*", which included a colourised version of *Probotector*, except with the level select from the Japanese release, and – despite the name – the normal Euro-version robots replaced by the human characters of the "*Contra*" iteration. Sigh.

PLAY IT NOW ON: Visual Boy Advance is the GB emulator of champions.

1992
CONTRA FORCE (NES)

Next, just to really throw a spanner into the works, Konami released an NES follow-up that had no apparent connection to any of the other games in the series, featured none of the same characters or settings, and played completely differently. A fairly standard NES side-scrolling platform shooter, *Contra Force* gives you control of four different characters who can occasionally be swapped between, and is pretty good fun. It's got absolutely nothing to do with *Contra*, though, (it was originally meant to be an unrelated game under the name of "Arc Hound") unless you count one of the characters being called "Beans", so in the interests of saving space we'll move swiftly on.

PLAY IT NOW ON: The best NES emu remains the superb VirtuaNES.

» There isn't much going on in this shot, but how often do you get to use a picture of a fork-lift truck in a game, eh?

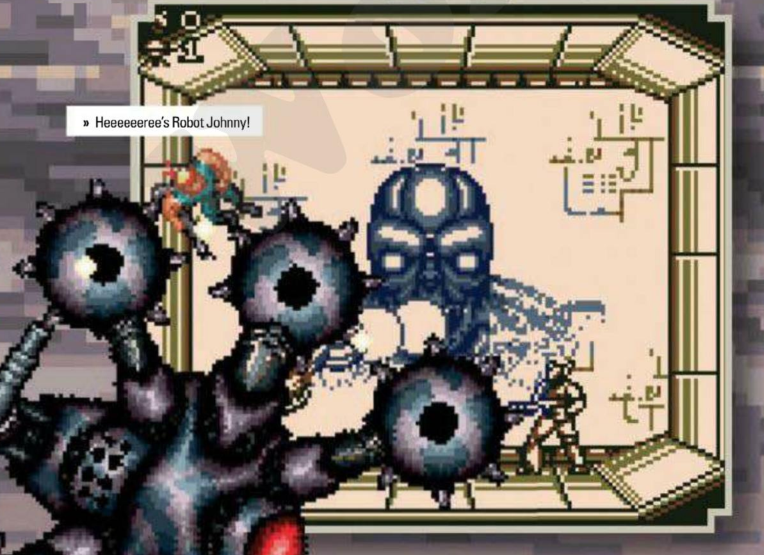


» In real life, this would be very hard to do.

1992
CONTRA SPIRITS AKA CONTRA 3 – THE ALIEN WARS AKA SUPER PROBOTECTOR – ALIEN REBELS (SNES)

Even though the series was only five years old at the time, 1992 was when *Contra* truly came of age. The SNES game was one of the console's most lauded titles from the day of release, and time hasn't withered its appeal any. It's a phenomenal game, stuffed with spectacular set pieces but relentlessly ferocious in between too, with barely a second for the player to catch their breath. Everyone has their favourite moment – whether it be the terrifying skeleton robot ripping the walls apart to get at you, the tremendous rotating overhead-view levels or the motorbike chase culminating in a helicopter ride where you end up leaping between missiles in flight to attack the enemy airship – but there isn't a single weak spot all the way to the end. (And if you're not playing it on Hard you haven't seen the real end yet, incidentally.) Simply one of the best games of all time.

PLAY IT NOW ON:
The Definitive's SNES emu of choice is the mighty ZSNES.



» Heeeeeeree's Robot Johnny!

1994
CONTRA – THE ALIEN WARS AKA CONTRA SPIRITS AKA PROBOTECTOR 2 (GAME BOY)

Inexplicably shedding the "3" from its name for the GB release, and with the Euro version adopting the name of the completely different earlier NES game (hngh), this was nevertheless a very impressive cut-down version of the SNES title. Most of the signature scenes make it across, including the overhead-view levels, and it's every bit as tough as its grown-up counterparts (though there's also an Easy mode that lets you practise on softened-up versions of the first three stages). A magnificent achievement on the primitive hardware, a challenge in its own right, and would it really have been so hard to call it *Probotector 3*, you morons?

PLAY IT NOW ON: Visual Boy Advance.

» Sadly, this shot doesn't feature our favourite *Hard Corps* character, the fantastic man/wolf hybrid Brad Fang. We wish we were Brad Fang.

1994
CONTRA HARD CORPS AKA PROBOTECTOR (MEGA DRIVE)

Oh, for God's sake, Konami. *Probotector*? You're just taking the piss now, aren't you? You couldn't even be bothered to call it *Mega Probotector* or something? Tchah. Anyway, *Contra Hard Corps* – or *Contra Really Very Hard Indeed Corps*, as it should more accurately be titled, is a tour de force, right up there with the SNES game in the *Contra* pantheon. A riot of action and invention and humour and explosions from the off, *Hard Corps* looks like the result of an illicit liaison between *Contra 3* and ex-Konami coders Treasure's 1993 *Gunstar Heroes*. Indeed, *Hard Corps* has Treasure hallmarks stamped all over it, from the running bosses to the morphing enemies made of cubes, the 3D stages where the action moves towards the player and "out" of the screen rather than the more traditional way, and the bizarre fighting spin-off sections. Maybe Treasure left blueprints lying around when they left. (Or maybe on the way out they stole some. If you've played *Gunstar Super Heroes* on the GBA, you'll recognise the flying stage in *Hard Corps*, for example.)

The variety of levels is breathtaking, and with multiple characters, branching routes and different endings the replay value is immense. You'll have to sweat blood to see even one of the credits sequences, however, and if you want to have the remotest chance of making your way through all that *Hard Corps* has to offer, make sure to get the Japanese version. It gives you three hits per life (instead of one in the US and PAL releases), and the energy bar is also restored after a level, so overall it's only about 30% as hard as the other versions. (It also has cheat codes, which were disabled in the Western releases.)

PLAY IT NOW ON:
The multi-Sega emu Fusion.

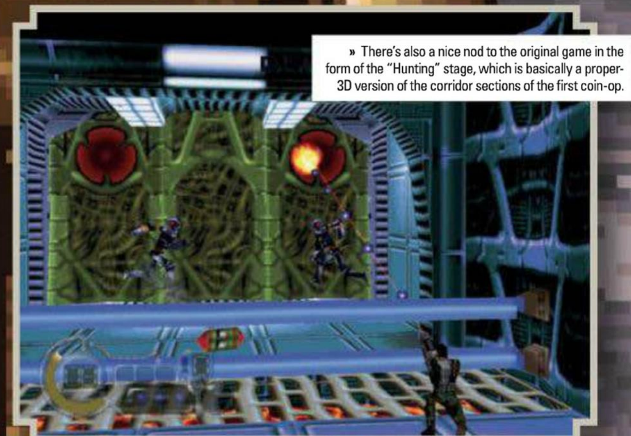
1996
CONTRA: LEGACY OF WAR (PSONE)

Konami's first 32-bit *Contra* marked the series' most radical departure since *Contra Force*. Developer Appaloosa Interactive delivered something most closely resembling a polygonal version of the overhead-view stages from the SNES game, which can be rendered even more three-dimensional with the gimmicky 3D-glasses mode. The viewpoint makes accurate aiming difficult, the four selectable characters differ only in their power-up weapons, and since power-up weapons last for roughly three seconds it's not much of an addition. It all moves at breakneck pace, though, and as with most *Contra*s it's ferociously difficult, so there's at least plenty of challenge. And the 3D is occasionally used well, as the soldiers run up ramps and across bridges and seek cover behind pillars and the like. But in most respects *LOW* was a bad misjudgement of what people liked about the series, and history hasn't remembered it fondly.

PLAY IT NOW ON: Thanks to remarkable recent breakthroughs in the world of firmware hacking, your reporter actually played his copy of *Legacy Of War* on his PSP. But it should work just as well on a PS2 if you snag a cheap copy from a bargain bin somewhere.



» Most of *Legacy* is pretty brown and murky.



» There's also a nice nod to the original game in the form of the "Hunting" stage, which is basically a proper-3D version of the corridor sections of the first coin-op.

1998
THE CONTRA ADVENTURE (PSONE)

Legacy Of War was less than popular, so the next outing (also coded by Appaloosa) was something of a back-to-basics mission. A third of the levels are (despite being presented in *Klonoa*-style pseudo-3D) classic-style side-scrolling *Contra*, with the other two-thirds split between the polygonal overhead view of *LOW* and third-person *Tomb Raider*-type 3D. (Parts of the game take place in a very *Tomb Raider*ish setting, too.) Several of the earlier game's more annoying flaws are fixed (upgraded weapons once more stay with you until you die, and as with *Contra 3* you only lose the one you were actually using at the time), and the difficulty is less punishing, although being sent back to the start of a long level when you "continue" can be hard to take. There's plenty of invention, too, like the level set in a falling lift with zero gravity. And while it still wasn't a big hit with *Contra* fans, it's miles better than its predecessor.

PLAY IT NOW ON: Again, *Contra Adventure* – and most other PSone games – can be played via emulation on a PSP, or by running the original discs on your PSone or PS2.

2002
CONTRA HARD SPIRITS AKA CONTRA ADVANCE: THE ALIEN WARS EX (GBA)

In the early days the GBA was bombarded with quick shovelware ports of SNES games, and this was one of the more controversial. It's basically the SNES game, but hacked up rather crudely (there are no smart bombs and you can no longer carry two weapons at once, considerably reducing the game's strategic depth), with the overhead-view levels removed and replaced by two new stages. It's a swings-and-roundabouts kind of deal, and the loss of firepower sophistication is a heavy blow, but this is still a brilliant game, and the new levels more than live up to the standard of the others. Much more annoying is the cheapskate absence of a battery save, meaning you'll have to carry a pen and notepad around to write down stupid long passwords if you don't want to play through the whole thing in one go.



» This new level is inspired by a very similar one from *Contra Hard Corps*. The other is reminiscent of a stage from *Super Contra*.

2002
CONTRA: SHATTERED SOLDIER (PS2)

For the new generation of hardware, Konami finally took the hint and gave the fans what they wanted. Handing control back to, Nobuya Nakazato, the director of *Contra 3* and *Hard Corps*, produced a game taken straight from the original *Contra* blueprint – five brutally hard stages of run-'n'-gun platform action. (In fact, most victims peg *Shattered Soldier* as even tougher than *Hard Corps*, which is saying something and a half.) Pseudo-3D graphics with a dark, gritty palette gave it an intense atmosphere, and lots of references to previous games (particularly *Contra 3*, whose giant-turtle boss and hanging-off-a-missile sections made reappearances) made sure the player felt at home.

PLAY IT NOW ON: A day when you're really in the zone.

» All he actually wants is a nice tickle under the chin, but no, YOU had to wade in with the rocket-propelled grenades.

» Man, that must be really difficult to aim.



2004
NEO CONTRA (PS2)

The *Contra* series ends (for now, at least) on a pretty weird note. *Neo Contra* (with Nakazato at the helm again) verges on satire much of the time, with a ludicrous plot set nearly two thousand years after the first game, in which Bill Rizer is still fighting the good fight, this time against a band of evil mercenaries who have hijacked the good name of the Contra unit in order to wreak mayhem on a post-apocalyptic Earth where "No one sane or logical can expect to survive for even three days", etc etc. The storyline is snooker loopy, but the gameplay's pretty much in the style of *Legacy Of War*, except with the controls and viewpoint improved and the difficulty turned way down. There are some bizarre Konami cameos (Konameos?), such as a set of weapons from *Gradius V* showing up later on, and generally this is as close as the *Contra* series comes to a *Parodius*. Evidently Konami was a bit tired and emotional after 20 years of non-stop slaughter, and so are we, so we're off for a lie down in a ditch. See you next time!

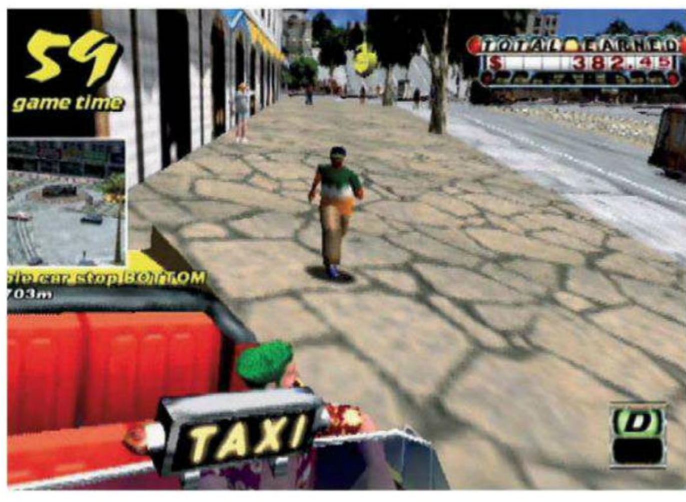
PLAY IT NOW ON: Drugs. (NB: RETRO GAMER DOES NOT ENDORSE DRUG ABUSE.)

THE MAKING OF...

CRAZY TAXI

When Crazy Taxi hit arcades back in 1999, it left its oily skid marks all over their sticky carpets. Creating an insurgence of teary-eyed, lovelorn arcade cabs, the A-to-B driving arcade smash certainly shook things up on its release. Stuart Hunt hops in a metaphorical taxi with the game's creator, Kenji Kanno. What are you waiting for? Jump in, the meter's running…





IN THE KNOW



» **PUBLISHER:** SEGA
» **DEVELOPER:** HITMAKER
» **RELEASED:** 1999
» **GENRE:** RACING
» **EXPECT TO PAY:** A LOT, SAVE A BUNDLE AND BUY A DREAMCAST

» Stop at the mark, not on the church!



How many times have you been stuck in traffic on a piping hot day? The air-con has passed out from heat exhaustion, the radio bleats out monotonous mumblings about money-saving late holiday deals and your bladder has picked an impromptu moment to register a cup of coffee you drank earlier that morning. Taking a sly glance out of your window to remedy your boredom, you notice a tempting mirage of empty lanes lying invitingly on the other side of the dual carriageway. The thought of putting your foot down, humping that central reservation and finally making some headway naughtily enters your subconscious. However, there it enters and there it remains, until the seemingly endless stream of cars ahead of you finally quit rubbernecking a feather-touch headlight prang and allow you to get home from work.

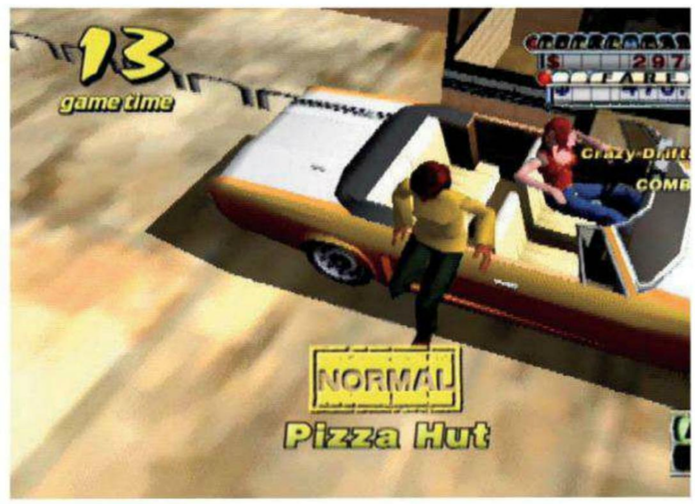
Living in the *Crazi Taxi* universe – where laws state that ferrying someone to KFC for cash will grant you a double-0 licence to drive wherever and however you like – is surely the stuff of dreams. But pull up those handbrakes; if this were the *Crazy Taxi* universe then I would suspect many of us would be supping our food through a straw, and I would be scratching my head at this point, pondering how to finish this paragraph without the help of this wonderful irony: it was this stuffy state of affairs that would provide the genesis of Sega's prolific taxicab.

"The inspiration behind *Crazy Taxi* came to me when I was stuck in traffic one day. I noticed a quiet lane on the opposite side of the road and thought how cool it would be to drive onto it and fly down the road. I was sure that there were many people sitting in their cars who would have agreed with me," muses Kenji Kanno, the creative director of the franchise.

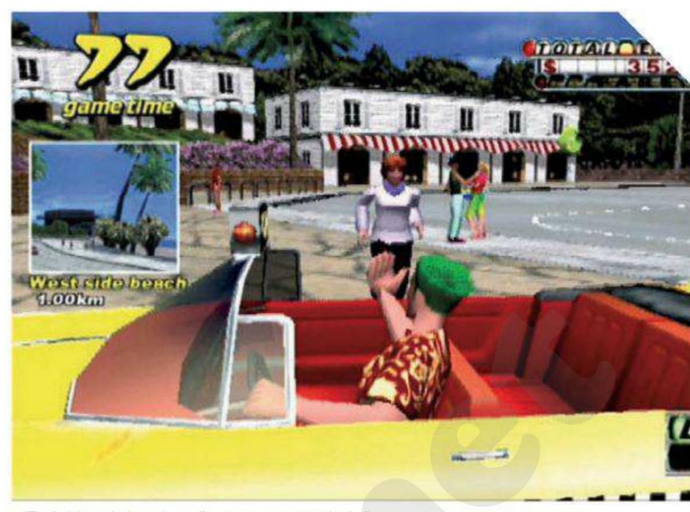
With Kenji's seed of a concept beginning to take shape, and a team of 12 people assigned to the project, he began developing his idea under his AM3 department's new moniker, Hitmaker. He explains that the first hurdle that his team faced was deciding how best to transform his concept into a theme that would lend itself well to an arcade game. While hindsight merrily sings Kenji's praises for his decision to make a taxi-themed arcade racer, it was a direction that was initially met with concern by some members of his development team.

"It was very difficult for us to draw a consensus on making a game out of the 'taxi' theme. Some of the team were worried that the concept wouldn't be cool enough to polarise an arcade game around," he remembers.

Thankfully, persistence prevailed and the idea entered production. After 18 months of development, *Crazy Taxi* was finally completed, and when it eventually parked up beside the arcade machines of 1999 it exposed a famine of originality among its peers. A large number of stale looking machines were being churned out – predominantly gun and racing titles – which relied on high-resolution aesthetics and quirky cabinets to hide their tired formulas. *Crazy Taxi*'s arrival



» Thelma and Louise went for a bite to eat before driving off a cliff.



» "That's right, a trip down the road's gonna cost you 5,000 bucks."

brought a much-needed breath of fresh air through arcade doors and with it another irony.

Kenji candidly draws my attention to the fact that the game harks back to the classic score-chasing days of arcade gaming. There are no stages to work through and no contesting taxi firms to out fare; it's simply a race to earn as many points as possible before a depleting timer runs out.

Another factor, which enforced its retro roots was that a single credit could offer almost an hour of play time to a skilled driver. By learning the routes and strategically picking your fares, it was possible to amass scores that would easily eclipse the bottom end of the 'Super License' benchmark. In fact, the Twin Galaxies Intergalactic scoreboard lists the game's highest score at an astonishing $106,184.94, an exhausting feat that was achieved by the nimble fingers of Florida's Jean-Claude Padilla.

Trying to attain exactly what it was that made the game feel so refreshing, when playing it through retrospective rear-view mirrors, will pain the brain cells. It wasn't screeching its tyres against new ground; it wasn't even taking a dramatic leap visually. It was simply an old style arcade game delivered in an original way.

However you looked at it, one thing would remain clear: few would forget the first time they caught sight of its cab. Its dazzling deep-yellow hue could light up even the most desolate and dank arcade corners. Its simple yet tactile frame – housing that fantastically loose steering wheel, mousemat seat cushion and rudimentary, *Chase HQ* gear stick – was arcade minimalism at its loudest. The game's graphics perfectly suited its look, and its Americana-style setting framed its beautifully sun-drenched city, colourful array of squeaky-voiced inhabitants and pristine fleet of glistening taxicabs perfectly. Every iota of *Crazy Taxi* was carefully considered, even down to the weather, admits Kenji. "I wanted people to enjoy playing it, so the in-game weather is extremely bright. We really wanted it to complement the refreshing style of the game,"

This fresh vibrant look was a result of Sega's biggest leap in the amalgamation

"THE INSPIRATION BEHIND CRAZY TAXI CAME TO ME WHEN I WAS STUCK IN TRAFFIC ONE DAY. I NOTICED A QUIET LANE ON THE OPPOSITE SIDE OF THE ROAD AND THOUGHT HOW COOL IT WOULD BE TO DRIVE ONTO IT" KENJI KANNO ON HOW HE CAME UP WITH THE IDEA FOR CRAZY TAXI

DEVELOPER HIGHLIGHTS

AFTER BURNER II
SYSTEM: ARCADE
YEAR: 1987

FIGHTING VIPERS
SYSTEMS: ARCADE, SATURN
YEAR: 1995

SHENMUE
SYSTEM: DREAMCAST
YEAR: 1999



» Axel was trying to impress the ladies with the infinity pool he just had fitted.



» Sparks fly as Axel puts his foot down into heavy traffic.



CRAZY BOX OUT

The Crazy Box mode, introduced on the Dreamcast port, allowed gamers to hone their taxiing skills for the main game. This added extra was popular among fans of the game. It offered experts the chance to improve their skills while offering novices the chance to learn and practise the 'cab stunts'.
"I wanted to include some tutorial content for its Dreamcast release, but not be pushy with it. I was really happy with the game's play cycle. You could become better in the main mode by playing the mini-games – new situations could be unlocked by playing the main game – this would draw you back to the Crazy Box mode." Kenji then adds: "I liked playing all the Crazy Box missions. To stretch a point, I guess I did enjoy Crazy Zig-Zag 2 the most. I felt it best maximised the player's sense of mastery to feel like, 'Wow, I'm a genius!'"



of its arcade and console markets: The NAOMI board. This acronym for New Arcade Operation Machine Idea may have shared body parts with the Dreamcast (both used the same Hitachi SH-4 CPU, digital processing technology and AKA Yamaha sound system), but differences could be drawn between the two siblings. The NAOMI boards were capable of cramming twice as many graphics, and up to four times the amount of sound memory than the noble Dreamcast. And by 'stacking' NAOMIs it was possible to improve their performance even further. While the idea of stacking two Dreamcasts together might appease Mega CD enthusiasts, it unfortunately proves ineffective in accelerating the look and speed of its games.

Released in 1999 – the same year the Dreamcast landed on UK shelves – *Crazy Taxi* paved the way for a glut of iconic arcade games that would later be ported, practically unsullied, onto the machine. This would further fuel the criticism that the tactile-looking NAOMI cabs were just simply 'Dreamcasts in taller boxes'.

Merging both markets proved a long and tortuous taxi ride for Sega, leaving it with a substantial fare that it simply couldn't 'taxi-dodge'. While its arcade ports of *Virtua Cop*, *Daytona USA* and the *Virtua Fighter* series proved to be among the most prolific titles for the Saturn, the console failed to attract the wave of 'new gamers' that Sony had mined for with the PlayStation.

Sony's late entry into the console arena had shaken it violently. It was cleverly marketed to push gaming back into mainstream territories that it had not seen for almost a decade. It was successful in attracting a glut of new blood, and allowed timorous gamers to finally release their discomforting skeletal passion for videogames from their closets.



» A nice little nod to the NAOMI arcade board.

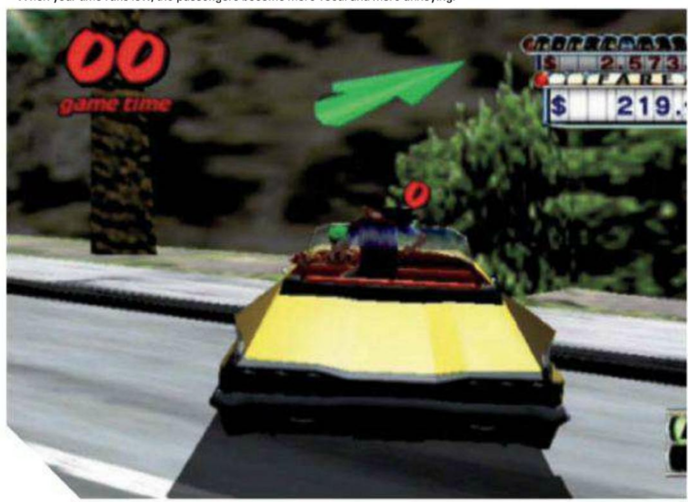
It's difficult to comprehend why some of Sega's most diverse and original titles – and two envelope-pushing consoles – failed to reap the rewards it so wholeheartedly deserved. Sega truly came out with all guns blazing during that tumultuous gaming period, and no title supports this theory better than *Crazy Taxi*.

Taking the role of a maniacal taxi driver, the player must collect and deliver what seems to be an infinite number of customers to their desired destinations. The faster and more reckless you make the trip the more cash you earn. Three different coloured markers net the contesting fares: red, green, and yellow; with each colour indicating how far your money-squandering customers will ask you to travel.

The plentiful fares scattered around the game will contest for your attention. And despite witnessing you mount the kerb, plough into screaming pedestrians, flip a coach into the air and screech to a grinding halt, their reaction is not one of shock, or anger, but one of relief as they merrily jump into the back seat of your taxi, impatiently barking "take me to the Church, please".

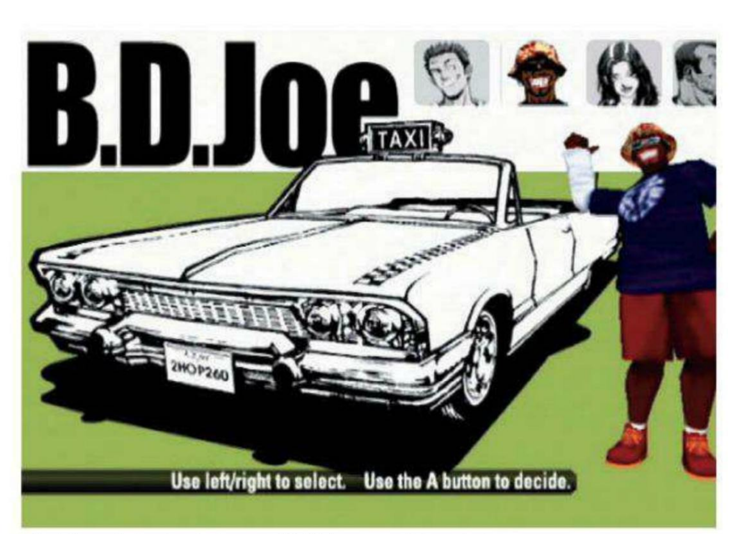
To help shave precious seconds off your time, as well as enabling you to earn bigger tips, the game introduced a number of special manoeuvres. And 'Crazy Through-ing' awarded points for irresponsible driving. Winding through tiny gaps in the traffic and leaping from multistorey car parks was a sure fire way to rack up the dollars from the overly excited passengers. The 'Crazy Drift' allowed tight corners and 'you're going the wrong ways' to be remedied with relative ease.


» When your time runs low, the passengers become more vocal and more annoying.



» Wow! There's something you don't see much of these days: a pig balancing on a green arrow."





» Here's the game's character-select screen – which BD Joe seems overly happy about.

The whole game is played out in one city; an odd hybrid of the searing streets of California and the steep slopes of San Francisco. Trying to drive just a few inches over its snaking roads, occupied by a glutinous army of traffic, is a test for even the most dexterous of gamers.

As well as plentiful collision-fodder, the streets teemed with recognisable locales: Tower Records, The Fila Store, and um… Popcorn Mania, all set to send the green directional arrow into a swirling frenzy. The decision to have familiar looking brands juxtaposing against the wackiness of the game, is something that Kenji hoped would add to the game's charm.

"We all went into *Crazy Taxi* with the intention of making an enjoyable arcade experience with humour," he says. "We really wanted to make the player feel like they were driving in a real world, and felt that including the franchises was a good way of achieving this."

To accompany its brash visuals, the game needed a suitably strident soundtrack. Kenji remembers vividly the vast number of tracks he had to listen to, and the countless trips to music stores he made before stumbling across the perfect sound for the game.

The rocking fanfare he rested on – tracks by The Offspring and Bad Religion – might have proved a perfect catalyst for excitement-pheromones, but they're hardly the tunes to germinate a peaceful and productive working environment. But then, when painting such a rambunctious riot of colourful gameplay, I guess inspiration can be farmed from anywhere.

"I believe that music plays a very important aspect of getting the gameplay style right. The game's soundtrack is usually chosen after the design of the game has been confirmed. I went from shop to shop listening to as many demos as possible, and during the latter stages of the game's development the team would listen to the songs while they worked," says Kenji.

Noticing that we're nearing the end of our journey, we catch a glimpse of an ominous red tally smiling back at us from the cab's meter. We hastily fire our last question at Kenji: if you were a taxi driver, who would you most like to have sitting in the back of your cab?'

After pausing for thought, he answers: "millionaires who tip generously, right?"

Perhaps this might explain why working a 50-second shift in *Crazy Taxi* can earn you such a ridiculous amount of money; the game's populated by tip-loving millionaires.

"IT WAS VERY DIFFICULT FOR US TO DRAW A CONSENSUS ON MAKING A GAME OUT OF THE 'TAXI' THEME. SOME OF THE TEAM WERE WORRIED THAT THE CONCEPT WOULDN'T BE COOL ENOUGH" KENJI ON HIS DIFFICULTY SELLING THE CRAZY TAXI IDEA

LIFE'S NOT FARE

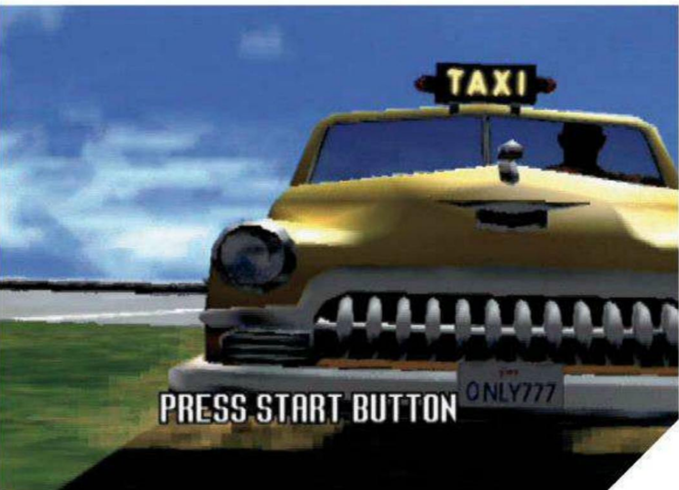
Life was certainly harsh on the poor old Dreamcast. A vast library of killer apps, crisp arcade visuals and even a Tamagotchi for its control pad weren't enough to arm it during the last 'great' console war. The Dreamcast port of *Crazy Taxi* is a true testament to its awesome power. Released a year into its life, it actually improved on the arcade game in a number of ways. As well as offering a brand new city to run amok in, its quirky Crazy Box mode offered a plethora of addictive mini-games. Becoming the fourth best-selling game on the system ensured that its release would mark a prominent milestone in Sega's IP. The game would later spawn two sequels on the Dreamcast: *Crazy Taxi 2*, and *Crazy Taxi 3: High Roller*. Its latest incarnation comes in the portable form of *Crazy Taxi: Fare Wars* on the PSP. It features ports of both *Crazy Taxi 1* and *2* and is bundled with a new soundtrack. *Crazy Taxi* purists might be sad to hear that the game doesn't have the original licences. So, instead of pulling up outside KFC, players will now have to race to get to the likes of the rather grey-sounding FCS (Fried Chicken Shack).



» "I said Kentucky Fried Chicken, not Kentucky High Chicken!"



» Sorry, but would you seriously get in a cab with this man?



DEVELOPER LOOKBACK

AFTER STARTING OFF SMALL IN THE ARCADES, KONAMI SOON LAUNCHED INTO A LUCRATIVE DEAL WITH NINTENDO THAT SAW IT BECOME A MAJOR PLAYER ON THE NES. THE GOOD TIMES WEREN'T TO LAST THOUGH, WITH KONAMI FACING A DIFFICULT TIME IN THE NINETIES, AS MIKE TOOLEY EXPLAINS…

Konami (PART 2)



Konami mapped the Eighties with milestone games; each one a synopsis of the time it was created, from *Frogger* to *Scramble* to *Castlevania*. The genre-creating Konami had a quality title for all tastes, but while the videogames crash of the Eighties presented Konami with opportunity, to be successful in the Nineties and beyond would be all about software and innovation. Something Konami would eventually have in spades.

With the lineage that Konami had created throughout the Eighties, it is difficult to find context for the problems it encountered in the early-Nineties. To create a perspective, Konami has to be viewed globally at this point. The core of Konami's business was the arcade operation that generated much of the company's revenue. Despite the huge success of the *Teenage Mutant Ninja Turtles* arcade machine, there was no escaping the fact that arcade revenues were dwindling. S a stellar performance from one title failed to generate the incomes that four or five average titles would have generated in the mid-Eighties.

The home markets, on the other hand, posed a very different challenge for Konami. The MSX was stalling in Japan as it approached the end of its natural life, while in Europe, the 8-bits were breathing their last breaths, meaning a reduction in licensing fees for conversions appearing in the West. This left Nintendo as Konami's biggest outlet for its software.

Despite being a favoured developer of Nintendo, Konami suffered due to Nintendo's determination to persevere with the NES and hold back the release of the incoming SNES. A gentleman's agreement had seen the creation of Ultra Games, allowing Konami to provide a route to market for non-Nintendo licensees such as EA and, unthinkably today, Rare, while letting Konami deliver more than the five titles a year to Nintendo's veteran console



Devil World is obscure, but surprisingly fun to play through.

Wild West C.O.W. Boys Of Moo Mesa. A bovine *Sunset Riders*.

The *Dance Dance* series is still massively popular.

KONAMI INSTANT EXPERT

KONAMI®

The Konami e-Amusement system lets arcade players play with gamers across Japan, with user IDs and rankings. This technology is being trialled in the US and Europe.

Konami currently has 310 health and fitness studios across Japan, there are plans to take this brand global.

Konami is running a Bemani competition through the Japanese arcades. Using the e-Amusement Pass, players can compete against each other locally before being picked as the top-eight players to represent their country.

In 2000, Konami introduced the *Tokimeki Memorial* fund. The fund raised ¥770 million in 2000 for a new version of *Tokimeki Memorial*, a role-playing love-story game that was introduced in 1995. In the game, the player has to win the heart of a schoolgirl by choosing from several phrases to ask her for a date. The fund that Konami sold takes the form of a foreign registered investment trust that is sold to Japanese residents in yen. The foreign registry confers tax advantages. Investors buy the fund in units of ¥10,000, with a minimum investment of ¥100,000. The funds raised are slated to develop and sell the third of the *Tokimeki Memorial* series and another love-simulation game designed for girls. A matrix drawn up by the company determines the level of return the investor receives. Roughly speaking, investors receive more than they invested if both games sell more than 200,000 copies each. Meanwhile, their loss is capped at ¥5,000 per ¥10,000 investment. The game sold 170,000 units in its first six months, going on to sell over 300,000.

Despite being one of the company's best franchises the *Silent Hill* that we play has been heavily censored. There were two versions of *Silent Hill 2* developed, both finished but only one was released, *Silent Hill 3* had a joke ending with aliens that wasn't intended, and *Silent Hill 4* wasn't a *Silent Hill* game at all, but a new title bearing similarities that was rewritten to fit the franchise.

In 1991, Konami became one of the few developers permitted to bring Mario to the masses with the Japanese-only release of *Mario Roulette*, which, more than any other game, demonstrated Konami's relationship with Nintendo, given the potency of Mario in the early-Nineties.

In 2004, Konami won a court case against the French FA, who had licensed the French national team and leagues to the French Football Promotion lobby. As the deal was signed in the Eighties, Konami argued that the inability to licence the team's copyright properly contravened antitrust laws. Konami won and the FFF was required to accept tender for the licensing of their copyrights.

Konami has just announced record profits of £246 million for year end 2008, this doesn't include any sales from *MGS4*. It has set a much higher target for the year 2008/2009.

than most companies were allowed to produce. In a meeting some years before, it had been agreed between Yamauchi Hiroshi (the then-Nintendo CEO) and Yoshinobu Nakama, Hiro Matsuda and Shokichi Ishihara (Konami's founders) that Konami would not publish games for anyone directly in competition with Nintendo. The MSX and European 8-bits were excluded from this agreement, but Sega's Master System, which would have provided Konami with a much-needed new market did fall foul.

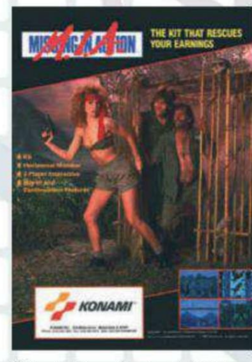
Konami found itself in the unenviable position of being solely equipped to facilitate dwindling markets. Yamauchi Hiroshi told *RePlay* magazine in 1990: "The next years will be difficult for many in the industry, especially Konami, we make games but don't always accomplish our aims, we have ideas and knowledge but for now we must find a way to allow players to embrace our ideas." At a Konami board meeting in early-1990, Hiro Matsuda convinced the board to pursue the licensing of properties that had served them so well with the *Turtles* arcade game.

Most notably, in 1990 Konami released *Aliens* to the arcade. The game became an instant hit and saw Cameron's sci-fi classic being retold in a two-dimensional setting, with the odd forced 3D set piece. Other arcade games failed to find a niche though, although in Japan much was made of the release of *Parodius*, a heady parody of *Gradius* and Japanese culture. However, it wouldn't be until the later home versions that *Parodius* would make a mark as a game in its own right.

Metal Gear Solid proved a case in point to underline Konami's fragmentation at this point in time. In Japan, *Solid Snake* was released as the *Metal Gear* sequel on the MSX, while in the US the NES was home to *Snake's Revenge* also a *Metal Gear* sequel. Two games, both different purporting to be the same, tailored to different territories and released on different formats. While *Super Contra* and *Castlevania III* went some way to bolster sales for the home, it was the home version of *Teenage Mutant Hero Turtles* that restored some sense of success to the year. The game made use of Nintendo Memory Management chips, to bring the arcade experience home. This in itself showed how tenuous Konami was at the time: it had spent the Eighties stripping games for home release, now it was throwing everything it could at a title to ensure quality. Banking on the economics of scale, the additional cartridge manufacture cost would be absorbed by the sheer volume of sales.

Handheld titles, on the other hand, showed slow returns. Even when Konami released its first sports licensed title for the Game Boy in the shape of *NFL Football*, the fanfare and reception were less than inspiring. The next few years would be quiet for Konami, despite relative success with *Lethal Enforcers* and *The Simpsons* in the arcade. Konami was struggling to find an identity and it was difficult to bring these games home, the machines in people's homes weren't powerful enough for *Lethal Enforcers* and the licence for *The Simpsons* prevented Konami releasing the game on anything other than a computer. Gamers the world over knew Konami for different things dependent on the territory that they lived in. Many of its releases were sequels to established games and there was a feeling in the industry that Konami had begun to lose its touch.

In truth, the company was simply readying its software for the 16-bit launches, with *Super Castlevania IV* being completed as far back as 1990, a good year before its eventual release. Indeed, for the 16-bit era Konami became one of the most prolific publishers of titles on all systems. In 1993, the firm said goodbye to its exclusive deal with Nintendo and began developing for the Mega Drive, its first title on Sega's machine being *Teenage Mutant Ninja Turtles: The Hyperstone Heist*. Konami's licensed games would appear on dual formats usually debuting on



A typical Konami flyer from the Eighties.

Despite setting the standard for music games in Japanese arcades, Konami has now fallen greatly behind the massive success of *Rock Band* and *Guitar Hero*.

The Wii version of *Pro Evolution 2008* proved to be a refreshing take on the franchise. Check it out.

the SNES, while original titles like *Rocket Knight Adventures* would be assessed after an initial sales run, only then would the conversions (if any) follow.

In the arcade, Konami was losing ground to Capcom, with the CPS-1 and 2 boards destroying everything in their wake. Konami's *Asterix* had a good following in Europe, but Stateside the little Gaul was practically unheard of, losing out to the likes of *Alien Vs Predator*. The humiliation didn't end there. While *Mortal Kombat* and *Street Fighter II* were attracting gamers back to the arcades, Konami's *Martial Champions* was attracting nothing but derision. Konami hit back with *X-Men*, a 2D realisation of the comic books, it wasn't enough and Konami was brushed aside in the arcades by Sega, Namco, Capcom and SNK, with only the *C.O.W Boys Of Moo Mesa* holding the charm of vintage Konami. For the next few years, Konami worked on 3D technology and didn't hit its stride in the arcades again until late-1996 with the release of *Winding Heat* and the seminal *GTi Club*.

While the arcade divisions researched new technology and slowed its release schedule, Konami's home divisions went into overdrive, in what would become one of the company's most creative periods. *Snatcher* found a home on the Mega-CD, *Axelay* became one of the most impressive shooters to grace the SNES, while the likes of *Sparkster*, *Castlevania*, *Animaniacs*, *Tiny Toons* and *Contra* all proved to be solid releases. Konami also returned to movie licensing with *Batman Returns*, making an adventure/RPG version for the PC. To balance the reduced publishing income Konami received from EA and Rare as they were now both third- and first-party developers for Nintendo, Konami published some smaller games in Europe, with Braben's brilliant (but buggy) *Frontier* being the standout title from this time.

With the release of the Saturn, PlayStation development again shifted up a gear. Licensing the PlayStation architecture for its arcade operation, Konami found the development platform it had been looking for, and while its teams developed evermore powerful arcade experiences, the home divisions worked tirelessly to develop more interesting games.

It was at this point that Konami's commitment to Sony started to become evident. Courted by Sega, Sony and Nintendo for the new generation, Konami virtually shunned Nintendo. In exchange for development tools for the then-labelled Ultra 64, Nintendo demanded exclusivity of any games developed with them. Nakama baulked at this, telling Nintendo's US president, Howard Lincoln, that: "Konami would take the chance that Nintendo would need them more than we need Nintendo." It was a risky manoeuvre born from the frustrations felt years before by many when Nintendo petulantly delayed the release of the SNES despite myriad cries from developers. The risky move would eventually pay great dividends when Nintendo next came knocking.

Interestingly, Konami has been credited with the name change for the N64, holding the copyright to the name Ultra, Nakama refused to sell the name to Nintendo, hoping instead to launch games for the N64 under the Ultra moniker ('*Ultra Castlevania*', '*Ultra Soccer*' and so on), creating the impression of first-party titles. Sadly for Nakama and Konami, Nintendo didn't play ball and simply renamed the console Nintendo 64.

During the shelf life of the Saturn and the PlayStation, Konami would produce 25 games for Sega's machine, and a staggering 119 for the PlayStation. Included in this roster were the games that would cement and become the bedrock of the franchises that would take the company into the new century, creating a minor revolution on the way.

Kojima's *Snatcher* would come to both machines (although he wouldn't play a part in these versions) and were updated from the PCE version with additional graphics and sounds. Konami removed the nudity from the original as a response to being named in US Senators Joseph Lieberman and Herbert Kohl's witch-hunt of the early-Nineties, where Konami was held



Akira Yamaoka: Meet the musical genius behind the *Silent Hill* games.



Konami's office as it looks today. *Frogger* mascot just out of shot…

Silent Hill 2's Pyramid Head is one of the scariest creations you're ever likely to face in a videogame.

up as lead protagonists in youth violence across the US following the release of *Lethal Enforcers*. Both the Senators were pictured holding Konami's Justifier lightguns at the time, something Nakama took very personally.

This was followed by the hearings themselves, where the senators attempted to explain the game's use of human characters – portrayed realistically through digitised graphics – bloodshed and guns was the message Konami wanted children to have, asking what sort of example the game and gun gave to children and questioning the kind of person that would indeed give a gun to children. In the highlight moment of the Senate's hearings, a somewhat confused Senator Lieberman questioned the racial sensitivity of a Konami advertisement stating that *Lethal Enforcers* players would fight off invading ninjas in Chinatown, claiming that as ninjas were ethnically Japanese, not Chinese, Konami might be offending someone – flamboyantly though Lieberman couldn't say who or what Konami may be offending. Konami was overshadowed at the hearings by Sega and the infamy surrounding *Night Trap*, but Nakama wasn't about to take a chance the second time.

Other Konami classics also received the 32-bit treatment: *Castlevania: Symphony Of The Night*, an epic telling of the Belmont's tale, featuring one of the greatest gaming soundtracks of all time was released for the PlayStation and Saturn. Sadly, politics within Konami's Chicago headquarters almost prevented the US from getting the game at all (the Saturn version remains exclusive to Japan), and the delay certainly took the game's momentum away, the best in the series showed only marginal sales compared to other versions, and the title was barely noticed on the game charts.

Metal Gear Solid on the other hand fared considerably better. Hideo Kojima returned to the series and effectively remade the original game in full 3D. The new hardware offered the freedom to explore the franchise, and although reminiscent of Capcom's *Resident Evil* visual style it was Kojima's grasp of narrative that would help take gaming to a new era. *Metal Gear* went some way towards blurring the lines between games and movies and was a totally interactive experience; gamers would lap the game up the world over. Kojima's idea of remaking the original for a global market was proved to be the right one, nascent gamers in the West had largely missed the original games. For Konami and the PlayStation audience, it was like having a whole new franchise.

Fundamental to these successes for Konami was the understanding that it took time to realise new technologies, so early releases on new hardware were usually games that rarely push a machine. For the first time in its existence, Konami stopped rushing. Deadlines came and went, some games launched, some games slipped, any additional development costs would be met by additional sales from selling quality products was the belief. This was all well and good for the market in Japan, but the US and Europe were struggling to find titles. 1996 looked to be an incredibly barren year for Western gamers on the Konami front. The US arm turned down many titles saying they were unsuitable for the US market (including *Castlevania: Symphony Of The Night*). With little to release, Konami Chicago set about sourcing titles out, Appaloosa Interactive was tasked with creating a new 3D *Contra* game. The contract between the two companies was weighed heavily in favour

SIX OF THE BEST

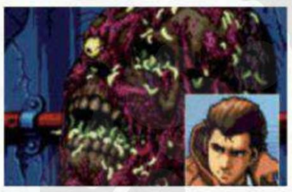


Silent Hill 2 PS2/Xbox/PC 2001

The follow on to *Silent Hill* wasn't a direct sequel. Starting with one of the greatest intros to any game, a long walk in the fog leads the player into a world riddled with guilt and horror. Multiple endings add to the longevity and are directly attributed to the player's actions throughout the game. A masterpiece in suspense and storytelling, seldom has a game been so debated at academic levels.

Castlevania: Symphony Of The Night 1997 PlayStation/Saturn/Xbox Live Arcade

This follow-up to *Chi No Rondo* is situated in a giant castle. Richter, the star of the last game, has been possessed by the dark priest Shaft, who he thought he'd slain, and now controls the castle. RPG elements are introduced, items have specific not obvious uses, and character levelling is vital. Visually and aurally stunning, this is Konami at its best.



Snatcher 1992 PC-E/PlayStation/Saturn

Reminiscent of *Blade Runner*, *Snatcher* fuses a world around human paranoia. Bioroids – or Snatchers – are machines that are killing people and taking their place in society. Feeling like a videogame version of *Invasion Of The Body Snatchers*, the graphical interface allows for first-person adventuring enhancing the interactivity of the game. A must play.



Axelay 1993 SNES/Virtual Console

When Hideo Ueda and Kazuhiko Ishida told their bosses they wanted to make *Axelay*, their bosses were sceptical. *Parodius* was out and doing good business, but with their pedigree they were given the green light. *Axelay* made great use of parallax scrolling and SNES's Mode 7 capabilities. Made all the more exceptional because of the challenge and bosses.



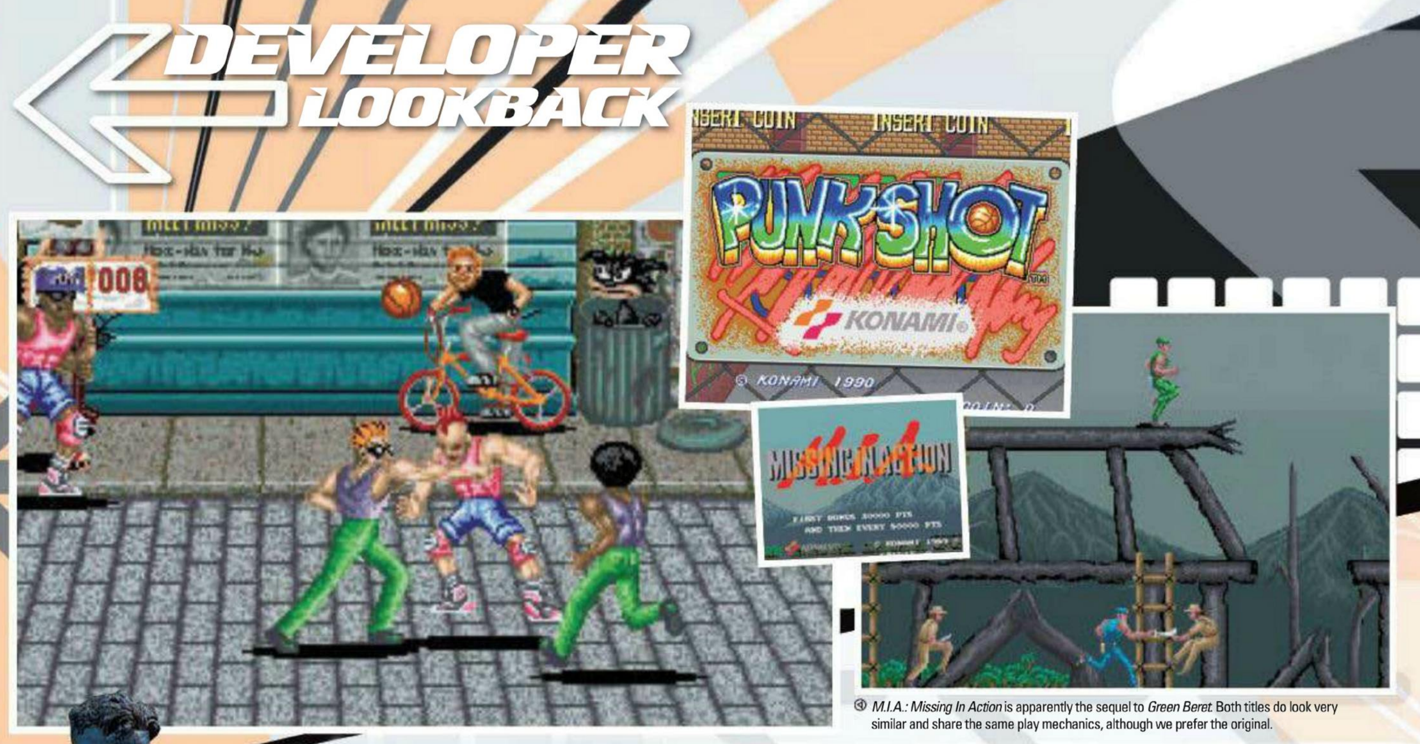
MGS2: Sons Of Liberty PS2/Xbox/PC

Set two years after the events of the first game, *MGS2* is set on an offshore clean-up facility that's been taken over by terrorists. The series finally came of age here, offering gamers the ability to shoot radios to stop enemies calling for backup and other innovative solutions to avoid being captured. *Metal Gear Solid 2* went on to sell 8 million copies worldwide.



International Superstar Soccer '98 N64/PS

Konami's premier sports title finally gained recognition in the US. Although the series had been around for a while in different guises, it was this iteration that introduced the through ball. Better than any football game before it, the inclusion of classic games bolstered what was already a tight package and was a fitting last hurrah before *Pro Evo* took the franchise.



M.I.A.: Missing In Action is apparently the sequel to *Green Beret*. Both titles do look very similar and share the same play mechanics, although we prefer the original.



Solid Snake, quite possibly Konami's most iconic character.



Castlevania: Dawn Of Sorrow on DS. It's good, but no *Symphony Of The Night*.

of Konami, and many penalty clauses were included to ensure the game was of a standard that Konami was happy to carry the *Contra* badge and that it was released around the other titles in Konami's calendar, reminiscent in many ways of the contract Konami signed with Nintendo when it developed and published *Mario Roulette* some years earlier. This evolved into the Konami business model.

Konami eventually returned to Nintendo as the Saturn started to die, a small showing on the N64 of only 14 games included classics such as *ISS '98* and *Castlevania 64*, fitting that a Nintendo console witnessed the franchise's debut in 3D. *Holy Magic Century* and *Rakuda Kids* came and went, sales didn't reflect their quality, but it wouldn't be until the GameCube that Konami and Nintendo would find their love for each other again.

Towards the end of the Nineties Konami revitalised itself in the arcades with titles like *Silent Scope* and *Dance Dance Revolution*, the latter at the time of writing is in its twenty third arcade iteration, and featured rather prominently in Madonna's *Hung Up* video. Konami also had great success with its *Guitar Freaks* franchise. Debuting in 1999 and receiving sequels annually, these games were the precursor for *Guitar Hero* and *Rock Band*. The series branches to include *DrumMania* and *KeyboardMania*, all of which can be linked together to create a full band experience. Being late to market with the home versions of these games is to date one of Konami's greatest mistakes. Although this is offset somewhat by the massive success that the *Dance Dance Revolution* franchise has had on home consoles. All the more interesting perhaps because Konami didn't show a lot of innovation through the Nineties, preferring the re-imagining of existing franchises, and to let others lead and then better their endeavours, as with *Silent Hill*.

Silent Hill was a response to Capcom's *Resident Evil*. Until that point the dev teams had preferred *Crypt Killer* and the vivid dystopias and characters from *Vandal Hearts* to deliver evil. Keiichiro Toyama's classic created a place of evil, a town that had been home to horror and devolved itself into an edifice of darkness. Each sequel would take place in the same town, with new characters fated into the world of *Silent Hill*. With a ten-year legacy, comics, novels, CDs, plays and an arcade game, *Silent Hill* is set to become one of Konami's most enduring series. But the revenue generated here pales when compared to Konami's biggest franchise developed in the 32-bit period, *Yu-Gi-Oh!*.

Yu-Gi-Oh! made its mediocre videogame debut in Japan in 2000 on the Game Boy, but it debuted globally in 2002 on the GBA and PlayStation – two consoles that were showing their age at the time, but were home to an established target audience. Based on a cartoon that was itself based on a manga, *Yu-Gi-Oh!* is a trading game, an Eastern variant of *Might The Gathering*. The initial games came with limited edition game cards; such was the clamour for these cards that in Japan both the PlayStation and GBA saw a slight sales spike on release of the titles, while some people purchased the games just for the cards. It wasn't just the games that make this such a lucrative franchise for Konami. In 1999, Konami became the sole producer and distributor of Yu-Gi-Oh! trading cards the world over, a decade later and the game just keeps evolving and is regularly compared to Warhammer for comparable excellence. To date, over 2.5 billion cards have been sold in Europe alone with no signs of slowing, coupled with the games and toys, *Yu-Gi-Oh!* stands firmly as Konami's greatest franchise and positions Konami uniquely in the industry. Unique in as much as it is the only primary videogame developer in the world

KONAMI TIMELINE 1990-2008

1990 KONAMI BEGINS MAKING GAMES FOR THE PC-ENGINE TO MAKE UP FOR LOST REVENUE FROM THE ARCADES AND HOME CONSOLES DUE TO A SLUMP IN 8-BIT MACHINES. *PARODIUS* DEBUTS IN THE ARCADES.

1991 KONAMI LAUNCHES ITS FIRST *SIMPSONS* GAME, ACCLAIM TAKES THE LICENCE FOR HOME CONSOLES, SO KONAMI IS CONFINED TO THE ARCADES AND 8-BIT MICROS. *TMNT* RECEIVES A STELLAR FOLLOW-UP BASED LOOSELY ON THE MOVIE.

1992 KONAMI STARTS PUBLISHING FOR THE MEGA DRIVE, DEBUTING WITH A *TURTLES* GAME.

1993 KONAMI BEGINS TO EXPLORE CD TECHNOLOGY ON THE PCE AND SEGA-CD. KONAMI HAS ITS MOST BOUNTIFUL YEAR ON THE SNES AND ACQUIRES THE LICENCE TO *BATMAN AND ROBIN*.

1994 KONAMI STARTS TO PRODUCE ITS FIRST PLAYSTATION GAMES AND LICENSED THE HARDWARE FOR THE ARCADES.

1995 KONAMI'S HEADQUARTERS RECEIVES SOME DAMAGE DUE TO THE KOBE EARTHQUAKE.

1996 *SPEED KING*, A *WIPEOUT* CLONE, DEBUTS IN JAPAN ARCADES. EACH ARCADE REQUIRES AN OPERATOR TO SUPERVISE GAMERS TO PREVENT INJURY AND ILLNESS. GAMERS COMPLAIN OF NAUSEA, AND PRODUCTION IS DISCONTINUED, A PSX PORT IS MADE TO ENSURE THE INVESTMENT IS NOT LOST.

1997 KONAMI ALLOWS THIRD-PARTY DEVELOPERS ACCESS TO KEY FRANCHISES FOR THE FIRST TIME.

1998 KONAMI ENTERS THE TRADING CARD BUSINESS AFTER SUCCESSFULLY ACQUIRING THE LICENCE TO *YU-GI-OH!*. THE FIRST *CASTLEVANIA* GAME IN 3D DEBUTS ON THE N64.

SIX TO MISS



Martial Champions 1993 Arcade/PC-E CD

With Capcom and SNK jostling for the number one arcade fighter, Konami returned with its first beat-'em-up since *Yie Ar Kung Fu*. With better hardware than the CPS-2, *Martial Champions* was stunning, but had very little depth. The characters were all clones of *SF* and *KOF* characters, and the backgrounds looked vaguely familiar.



Castlevania Legends 1997 Game Boy

All great franchises drop the ball sometimes, but this was truly bad. Lacklustre visuals do little to convey the atmosphere of *Castlevania*; the sound can be forgiven due to the hardware, but it's the disregard for the series' lineage that is unforgivable. Set after *SOTN* but purporting to be the first game, it's a real shame and best forgotten.



Rumble Roses 2004 PS2/Xbox

Wrestling is big in Japan, sexy women are big everywhere. Envious of Tecmo's *Dead Or Alive*, Konami created *Rumble Roses*. Tight camera angles and strong athletics do little to hide the loose gameplay, more a button masher than a tactical wrestler, it holds little challenge. The mud-wrestling sections put this on par with *BMX XXX*, avoid.



The Simpsons Bowling 2000 Arcade

Konami has had much success with *The Simpsons*, not this time though. Controlled with a trackball, the roster of characters are the usual *Simpsons* fare, but each character's stats are grossly unfair, with Homer and Willy having almost perfect aim. Shoot three strikes and you get a new special ball, that makes missing impossible.



Tiny Toon Adventures: Buster's Hidden Treasure 1993 Mega Drive

Tiny Toons were big business in the early-Nineties, appealing to kids and adults who'd been weaned on Warner Bros. Visually the Mega Drive had seldom looked crisper and the cast were all here. Unfortunately, many gamers played through it on the first time of asking. Yup, it really was that easy.



Yume Penguin Monogatari 1991 NES

The player takes on the role of Penta the penguin, who's been dumped by his girlfriend for being overweight. The new beau's henchmen attack Penta with food to maintain his weight, while you try desperately to lose weight and get fit by drinking diet drinks. Avoid unless you forever want to look in the mirror and grow paranoid.

> "TO BE A SUCCESS IN THE NINETIES WAS ALL ABOUT SOFTWARE AND INNOVATION. SOMETHING KONAMI HAD IN SPADES"

that could survive without making games, Konami's reach is long.

In 2000, after donating Konami's old facilities to Japan, The Kozuki Foundation for Higher Education established the Kozuki Foundation for Advanced Information Technology (approved by the Ministry of Education, Culture, Sports, Science and Technology) to which Kagemasa Kozuki was inaugurated as executive director. Konami actively pursues social wellness, indeed it describes the choice of logo colour as: "Konami Red, which is easy to familiarise with and expresses quality and class. It demonstrates the corporate attitude of New Konami Group, one that offers inspiration and reassurance, life with joy and pleasure. We are focused on creating a shift from the consumption of time to the value of time, changing all aspects of time into a bright and inspiring experience." Uttered by anyone else in the world of gaming these might sound like hollow sound bites, but don't forget Konami came to videogames as the jukebox industry started to fade. The company has fitness centres across Japan that in 2005 received authorisation by the Japanese Olympic Committee to become Japan's first 'JOC Athlete Support Centre'. Beijing may very well be host to the first gold medallist trained from the profits of videogames.

One of Konami's subsidiaries Combi Wellness Corporation is a Japanese Health Care Specialist pursuant in prolonging and improving the quality of people's lives up to and beyond retirement, making everything from medicines to exercise bikes and health foods, not only does it tie up with Konami's other endeavours it will eventually lead Konami into new arenas.

For the games, Konami has the biggest amusement arm in the industry, developing hardware and software for arcades; it makes LCD screens for pachinko slot machines; its arcade operators and gamers are supported by Konami's e-Amusement service; and casinos are serviced from Konami's casino facilities in Nevada.

Konami's back catalogue is now appearing at pace on its mobile and iPhone services and has been delivering everything from *Castlevania* to *Metal Gear Solid*, all tailored for the mobile market. With *Track & Field* and *Silent Hill* already supported there is no doubting Konami's dedication. Then there are the graphic novels and the interactive novels based on key franchises. Alongside a stellar release for *MGS4* and redefining *Pro Evolution Soccer* on the Wii, the future for Konami is bright and unimaginable, just as its past was.



Guitar Freaks has been around forever, but it's *Rock Band* that now gets the kudos.

1999 KONAMI IS FINALLY LISTED ON THE LONDON STOCK EXCHANGE AS TWO OF ITS BIGGEST FRANCHISES ARE BORN, *SILENT HILL* AND THE FIRST *YU-GI-OH!* GAME.

2000 KONAMI SETS UP THE NEVADA AMUSEMENT DIVISION TO CREATE GAMING MACHINES FOR CASINOS. IT ALSO CREATED A NEW FINANCIAL PRODUCT CALLED A GAME FUND.

2001 KONAMI ENTERS THE TOY CANDY BUSINESS AND MAKES HUDSON SOFT AN AFFILIATE.

2002 KONAMI PUBLISHES ITS FIRST XBOX GAMES. IT ALSO DEVELOPS ITS E-AMUSEMENT SYSTEM THAT ALLOWS ARCADE GAMERS TO PLAY ONLINE AGAINST OTHER ARCADE PLAYERS AND OTHER ARCADES.

2003 KONAMI CELEBRATES ITS 30TH ANNIVERSARY WITH A NEW LOGO AND ANNIVERSARY PACKS.

2004 KONAMI DEVELOPS ITS FIRST SPORTS EQUIPMENT AND DISTRIBUTES IT ACROSS JAPAN INTO ALL OF ITS SPORTS CLUBS.

2005 KONAMI INCREASES ITS HOLDING IN HUDSON SOFT.

2006 INTERNET REVOLUTION, INC WAS ESTABLISHED AS A JOINT VENTURE COMPANY WITH INTERNET INITIATIVE JAPAN, INC. THEIR AIMS ARE TO DEVELOP A TANGIBLE DOWNLOAD SERVICE AND TO INNOVATE ONLINE FEATURES IN GAMES.

2007 KONAMI BRINGS *PRO EVOLUTION SOCCER* TO THE Wii. DESPITE LOSING GROUND TO *FIFA* EVERYWHERE ELSE, ON THE Wii, KONAMI HAS TAKEN FOOTBALL TO THE NEXT LEVEL.

2008 KONAMI SUCCESSFULLY LAUNCHES *METAL GEAR SOLID 4* ON PLAYSTATION 3



THUNDERCATS

THUNDER, THUNDER, THUNDERCATS... NOOOOOOO!



- **PUBLISHER:** ELITE
- **RELEASED:** 1987
- **GENRE:** SCROLLING BEAT-'EM-UP
- **FEATURED HARDWARE:** ZX SPECTRUM/C64/AMSTRAD CPC
- **EXPECT TO PAY:** £1+

HISTORY



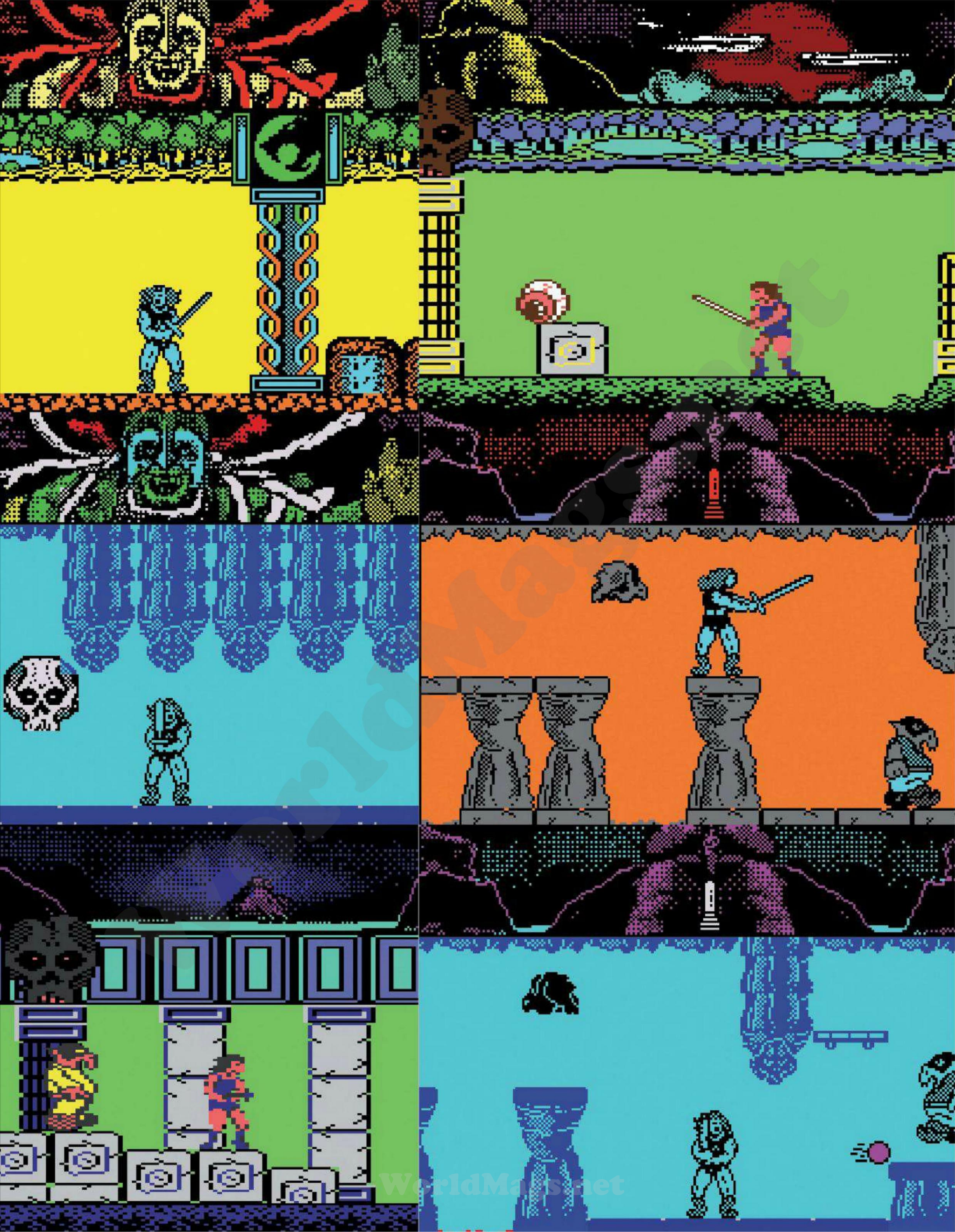
"Wow! Thundercats is brilliant. The logo is very neatly drawn, and the in-game graphics match it. They're excellent in every respect. Considering that the programmers had to move the colour as well as the pixels, the scrolling is very smooth. At first, despite Thundercats' playability, I didn't think it'd last 'The Treatment' and still be addictive, but two days later they had to prise me away from my Spectrum with a crowbar to make me write this comment!"

The above quote comes from *Crash* magazine, where Elite's *Thundercats* received a Crash Smash and scored a whopping 91%. It's a shame the aforementioned crowbar wasn't actually used to beat some sense into the reviewer, because *Thundercats* is a truly insipid game that deserves none of the accolades it received back in the day.

Horrifically linear and scarier than a date with Mumm-Ra, *Thundercats* is a painful effort from Elite that is constantly unfair and features the sort of ropey collision detection that makes you want to chuck your QuickShot Pro through the nearest window. Sure, you could argue that the action is fast and furious, but because of the insane pace that Lion-O constantly runs at, nine times out of ten you simply career into someone before you've had a chance to react to what's happening on screen. Now how is that fair?

While there are several levels to play through and a smattering of side-missions to complete – that saw Lion-O rescuing his friends – they all highlight the same boring gameplay; meaning that once you've seen one level, you've effectively seen everything *Thundercats* has to offer.

Granted, it received glowing reviews from the vast majority of magazines at the time of its release (although *Your Sinclair* has drastically changed its tune by the time of its budget reissue), and yes, it was a fairly pretty game – we've included all three 8-bit systems here for you to squabble over – but *Thundercats* just leaves us cold. Great cartoon, shame about the game.



ATARI 800XL

BROADLY CONSIDERED THE FINEST ALL-ROUNDER IN ATARI'S 8-BIT HOME COMPUTER RANGE, THE 800XL WAS ALSO THE BIGGEST SELLER IN GLOBAL TERMS. BUT DESPITE TOP-CALIBRE SOFTWARE SUPPORT FROM THE LIKES OF LUCASFILM, EA AND EPYX, IT NEVER PENETRATED THE HOME-COMPUTING MARKET TO THE EXTENT OF ITS NEAREST RIVAL, THE COMMODORE 64. MIKE BEVAN TAKES A WELL-EARNED RETROSPECTIVE LOOK AT THE HISTORY OF ATARI'S UNDERACHIEVING 8-BIT WONDER

INSTANT EXPERT

The Atari 800XL was one of the third generation of Atari 8-bit home computers and was preceded by the Atari 400, 800 and 1200XL. It is backwardly compatible with most software. It was Atari's bestselling 8-bit computer system worldwide.

Atari's home computers were the first to use special custom processors for graphics and device input/output, which freed up the main CPU for other tasks, a concept used by developers Jay Miner and Joe Decuir, on leaving Atari, for the design of the Amiga.

The Atari 8-bit computers were based on a 1.79MHz 6502 CPU, a considerably faster clock speed than its competitor, the C64, which had a 1MHz 6502 processor. As a result many maths-intensive titles, such as *Rescue On Fractalus!*, were faster on Atari machines than on the C64.

The 800XL had a little brother, the Atari 600XL, which was effectively the same machine but came equipped with 16K RAM, as opposed to the 800XL's 64K, and lacked the 800XL's composite video output.

The custom graphics chips in the 600XL/800XL computers were called ANTIC and GTIA, and offered sprite handling, advanced hardware scrolling and collision detection, and up to 256 colours, as opposed to the C64's 16-colour palette.

Four sound channels were available, originating from the Atari 800XL's custom POKEY chip, which also handled peripheral input/output. It was co-designed by *Star Raiders* creator Doug Neubauer.

A number of classic cross-platform 8-bit system games were initially programmed for Atari computers, including *Ballblazer, Rescue On Fractalus!, MULE, Archon, Boulder Dash, Dropzone,* and *Miner 2049er.*

Doug Neubauer reveals that Atari originally intended its computer line to have the same sound processor as the 2600.

The marketing, and consequently overall success of Atari's home computer line was catastrophically affected by the failure of the 2600 (VCS) console in 1983. The company had $400 million of unwanted console products in the pipeline in the face of a collapsing 2600 market, diverting corporate attention from the needs of the unfortunate Home Computer Division.

According to imdb.com, the repeated electronic beeping sound effect heard in the shuttle cockpit in the movie *Airplane II* is the sound of an Atari 8-bit computer's disc-drive booting up.

In the fifth issue of fondly remembered C64 magazine *Zzap!64*, which hit newsstands in September 1985, Archer Maclean penned a tips guide for his classic shoot-'em-up *Dropzone*, which contained the oft-quoted (and misquoted) following comment: "The Atari, being the Porsche of home computers, is capable of running *Dropzone* 2.5 times faster than the 64 and can handle any amount of blobs on screen. However, the 64 is still a respectable BMW 316 (S reg)." It was an unusual statement to find in a Commodore-oriented publication, and while we prefer to remain neutral in any debate regarding the technical superiority of either of the two competing machines, Archer may well have had a point.

Compared to the more popular home computers of the day, such as the ZX Spectrum and C64, Atari's computers were often regarded as high-end, and came equipped with an equally high-end price tag. In 1984, the newly released Atari 800XL, the computer designed to compete with the C64, was priced at around £250, considerably cheaper than its older sibling, the Atari 800, had been on launch in the US, but far more expensive than the Spectrum (£130) or C64 (£199). A higher price point than the more popular machines, and an over-reliance on the expensive cartridge format plagued Atari computer software. However, many classic games that originated on the Atari 8-bit computers were faster and more refined than the now often better-known conversions on other contemporary platforms. But by the mid-Eighties, Atari had found to its cost that high-quality software, flashy technical specifications and above average build-quality simply wasn't enough to win in the fight for the hearts and minds of hobbyists and computer dealers whose main concern was competitive pricing.

In hindsight, Atari's relative failure with its 8-bit home computer range, at least in terms of longevity compared to its rivals, seems harsh when you consider that they were very much ahead of their time in conception. Work began on the company's first two home computer systems, the Atari 400 and 800, after the release of the 2600 console in 1977. "We knew we needed to leapfrog the 2600 before somebody else did," says Atari designer Joe Decuir. "We saw the Apple II, Commodore and Radio Shack machines coming, and we wanted to design a machine that would support home computer characters and bitmap graphics." Another member of the 400/800 dev team was Jay Miner, future 'Father of the Amiga', who headed design of the graphics display/output chips known as ANTIC and CTIA. A third custom chip (POKEY) handled peripheral input/output and sound, and these separate co-processors freed up the main CPU, improving performance. An industry first, the concept of separate dedicated chips to drive graphics and sound would be taken to its logical extreme when ex-Atari employees, including Jay, were hired by Commodore to produce its first 16-bit home computer.

Debuting in the US in autumn 1979, the Atari 400 and 800 computers sold for $549 and $999 respectively. The 400, with its membrane keyboard, was geared towards the home hobbyist and games market and was intended to ship with 4K of RAM. The 800 was designed as a higher-end or business machine and came equipped with 8K of memory. Both computers were capable pieces of hardware for



Year released: 1983

Original price: US: $299, UK £249

Buy it now for: £15+

Associated magazines: Atari User, Page 6 (UK), Antic, ANALOG (US)

Why the Atari 800XL was great… Of all of Atari's 8-bit home computers it was the most competitive all-round package, with a full 64K RAM, built-in BASIC, great audio/visual capabilities and a decent, compact casing and keyboard. Programmers loved the quirks and cutting-edge capabilities of Atari's hardware, and some of the games software it spawned was truly groundbreaking. Much of the technical know-how gained in the design of the Atari 8-bit line went on to be used in the Amiga, and even today's PCs.



"COMPARED TO THE MORE POPULAR HOME COMPUTERS OF THE DAY, SUCH AS THE ZX SPECTRUM AND COMMODORE 64, ATARI'S COMPUTERS WERE OFTEN REGARDED AS HIGH-END, AND CAME EQUIPPED WITH AN EQUALLY HIGH-END PRICE TAG"

ATARI 800XL



» Two generations of Atari personal computers. The Atari 400 (top), Atari 800 (middle) and Atari 1200XL (bottom).



» Advertisements for the early Atari 8-bit computers publicised the systems' cutting-edge graphic capabilities and advanced sound compared to those of rival machines.

OTHER VERSIONS WHEN ONE MACHINE ISN'T ENOUGH

Atari 65XE

This replacement for the 800XL, launched in 1985, features sleeker styling, an updated version of Atari BASIC, and a new memory management chip called 'Freddie'. There's little to make it a better buy nowadays than its predecessor, although its very similar big brother, the 130XE, is notable for its 128K system RAM – double that of the 65XE and 800XL.



XE Game System

Released in answer to Nintendo's NES, this was a modified 65XE computer in console guise, more contemporary looking than the rather dated 5200 console. Add-on features included a detachable keyboard, which was a little 'mushy' in comparison to those of the computer line, and a lightgun. It came with *Missile Command* and Atari BASIC built-in.



Atari 800XE

The last 8-bit computer to be produced by Atari, the 800XE was almost identical to the 800XL, but with the slimline casing of the 65XE/130XE computers. It has other similarities to the 65XE, such as the inclusion of the 'Freddie' chip. The 800XE had a short lifespan, and was sold for only a year. It was popular in Eastern European territories such as Germany and Poland.





» The walking Atari Robot demo, which adorned many a computer shop window, demonstrating the impressive colour palette of the Atari computers.

their time, sporting an unprecedented 128-colour palette, hardware sprites, four joystick ports, and cartridge, peripheral and memory expansion interfaces allowing unheard of levels of customisation. By the time of its launch, falling RAM prices allowed Atari to increase the 400's memory capacity to 8K. Eventually the 400/800 shipped with a standard 16K or 48K of RAM respectively.

Atari's marketing division made considerable efforts to publicise the advanced audio-visual features of its home computer systems, focusing on their unique custom architecture, fast full-colour graphic capabilities and multi-channel sound. Atari CEO Ray Kassar's mandate to the company's design engineers had been that the systems should be invaluable for home and business use and have the capabilities to play exciting, cutting-edge games. Unfortunately, the company's reputation as a videogame manufacturer backfired on its Home Computer Division, as high-end consumers opted for the more business-like Apple II rather than the Atari 800, and gamers found the high cost of the 400 prohibitive compared to the cheaper VCS console. However, Atari did have one considerably powerful ace up its sleeve to lure gamers to its 8-bit computer line.

Doug Neubauer, an Atari engineer and co-designer of the POKEY chip, had developed a game while working at Atari. Inspired by the generic '*Star Trek*' games he'd seen running on mainframe systems, Doug took advantage of the new Atari hardware, which he describes as "a quantum leap from the 2600", to update the game with a first-person 3D perspective. Not a huge logical progression by today's standards, except for one fact: no one had ever created a full free-roaming 3D game before. The result, *Star Raiders*, was staggering when first experienced in 1979 as one of the launch titles for Atari's personal computers. It became one of the first examples of a home computer 'killer app' with many customers purchasing a 400 or 800 and a *Star Raiders* cartridge just to enjoy Neubauer's creation, among them a youthful Archer Maclean. "I saw *Star Raiders* and it just blew me away," he says. "Something very special was happening. I made it my mission to find out what." Another fan, Jeff Minter, couldn't wait to play it. "You can keep your *Elites* and *Wing Commanders*. For me the original *Star Raiders* will always be the best. 8K of sheer 6502 code poetry," he eulogises.

A further coup came in 1982, when LucasArts (then Lucasfilm) agreed to produce its first two hotly anticipated games, *Rescue On Fractalus!* and *Ballblazer*, exclusively for Atari machines. Both were developed on the Atari 800. "They wanted us to develop for the 2600 since it was their biggest installed base, but we were able to convince them we could do much more impressive games on the newer systems," says *Fractalus!* designer David Fox. "The target platform, initially, was the 5200. The other competing platforms at the time were the Apple II and C64," he continues. "The C64 didn't have much of an installed base then, but the Atari had a great set of chips, allowing us to squeeze a lot more out of the machine than we could on a computer like the Apple, which really had nothing like that." Ultimately, Lucasfilm's titles weren't enough to push Atari's computers into mainstream popularity, not being released until several years after the 5200 versions, and after the C64 had started to emerge as the 'it' machine for consumers. Lucasfilm eventually conceded and converted its games to the C64 and other platforms.

> "ATARI'S REPUTATION AS A VIDEOGAME MANUFACTURER BACKFIRED ON ITS HOME COMPUTER DIVISION"

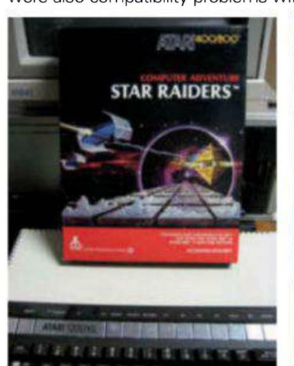
Around the time of the Lucasfilm deal, Atari was set to launch a successor to its 400/800 computers, with which it planned to phase out the older systems and boost flagging sales. Hitting shelves in January 1983, the Atari 1200 was intended as a more 'adult' computer system, and built on the successful 400/800 architecture, adding a professional-looking keyboard, 64K of RAM and improved peripheral support. The machine used a new graphics co-processor (GTIA) with an improved 256-colour palette. This had recently replaced the older CTIA chip in the 400/800 series and would be used in all future Atari 8-bit models. Designed to compete directly with the Apple II, the machine was unsuccessful in the competitive and soon-to-be-crowded market for business systems. There were also compatibility problems with some 400/800 software

PROJECT WIZARD

Atari's hard-working engineering department always strived for an experimental approach to design, although a number of ambitious and unusual research projects only ever reached prototype stage. One was Project Wizard, an incredibly strange concept that would have caused something of a stir in the industry had it ever seen the light of day. "It was the first, and only game controller that used your mind," says research engineer Tim McGuinness. "It was created in 1982, and was one of my projects. It used three electrical sensors on the forehead to control right-left motion of the cursor, and was designed for games like *Breakout*. 1,000 pieces were manufactured under the Atari Wizard Controller name for the Home Computer and VCS lines but were never released for sale. But it was so cool. You put on a headband with three sensors, and you willed the controller right and left – it took about ten minutes for most people to get control. Some could control it with blinding speed. I think the main reason it didn't go on sale was the psychological stigma of a computer reading your mind. It actually worked using simple electrical signals, through the skin, but I believe that was the factor. Especially in those days, when the public had no idea of how limited the power of their computers was…"



» Atari's 1981 computer product-line-up, with the 400 and 800 personal computers taking pride of place in the centre of the picture.





» **Left:** Atari's 'killer-app' *Star Raiders* perched atop the second-generation 1200XL. **Right:** A magazine advert for *Star Raiders* made a point of highlighting its pioneering first-person play-view.

COMMUNITY THE BEST ATARI WEBSITES

Atarimania
www.atarimania.com
A fabulous resource, in a similar vein to World of Spectrum and Lemon64, this site is a wonderful place to start for an overview of Atari 8-bit hardware and software. Atarimania has an enormous database of downloadable games and software, with screenshots and full-colour manual scans for many titles. It also features the occasional developer interview.



Atari Museum
www.atarimuseum.com
A massively impressive site, with a whole wealth of information covering Atari's 30-year history. Its archives are brimming with first-hand interviews with Atari staff, technical documents, Atari magazine scans, old adverts and press releases, and a bucket-load of other assorted resources. You name it and, if it's Atari-related, it will probably be here somewhere.



Back In Time
www.backntime.net
Another large Atari-oriented site with information and photos of pretty much every console and home computer model ever released by the famous company, along with features on official and third-party add-ons, and peripherals and unreleased prototype hardware. Check out the radio-show episodes featuring guests such as Sid Meier and Nolan Bushnell.



Atari Age
www.atariage.com
Last but not least we have probably the most popular Atari website in existence – if its incredibly busy and extensive forums are anything to go by, that is. Admittedly, the main content does concentrate on Atari console hardware – particularly the VCS – but the 5200 section is useful, and as an Atari community it has, to our knowledge, no peers in all cyberspace.

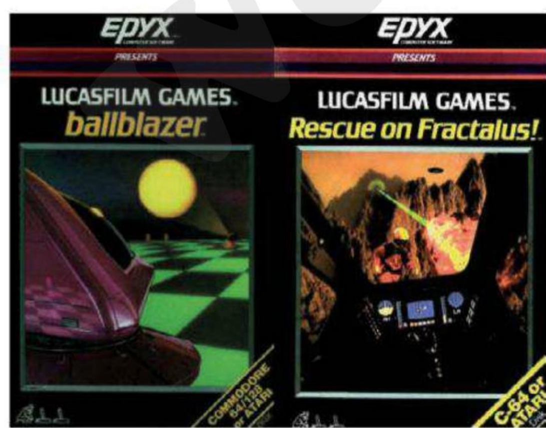


titles due to the 1200XL's upgraded BIOS. The unpopularity of the 1200XL drove sales of the 800 as consumers raced to purchase the cheaper machine before it was discontinued. The system was an embarrassing flop for Atari, retailing for just four months before the plug was pulled on production. It was never sold outside the US.

Tim McGuinness, Atari's assistant director for corporate research engineering at this time, was a major player in the design of the 1200 and the later XL models. "Before the release of the 1200XL, Atari had VisiCalc, a few great databases, and a good word processor. In fact, many employees at the company used Atari 800 computers for all business work. But the early Ataris were marketed as home computers and by late 1982 we were months from the release of the IBM PC and first Compaq 'Lunchbox' PC." Despite the lack of consumer support for the system, Tim remains proud. "The 1200XL was the big step up from the 800/400 series," he says. "Later systems such as the 800XL were lesser progressions from an evolutionary standpoint." In fact, the machine may have been better received had Atari not been struggling financially. "The company was falling apart in the US, as the major corporate marketing engine was dealing with the collapse of the VCS console market. The home computers were a poor stepchild," says Tim.

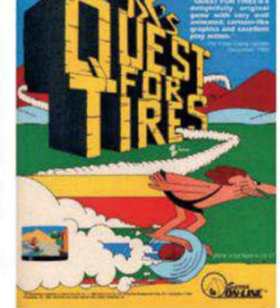
In 1983, Atari went into direct competition at the lower end of the market. Squaring up against the C64, it launched the Atari 600XL and 800XL computers. Externally quite similar to the 1200XL, but abandoning the function keys and built-in demos, they were the first machines to include in-built Atari BASIC as standard. The 600XL/800XL came equipped with 16K or 64K RAM respectively and had two joystick ports. The Parallel Bus Interface (PBI) was added, allowing the addition of advanced peripherals. The machines were very much scaled down versions of the 1200XL, and to reduce production costs further following Jack Tramiel's takeover of Atari in 1984, much of the manufacturing infrastructure was moved to Hong Kong. The price-cutting was seen as an effort to directly undercut Commodore, which had forcibly ejected Tramiel earlier in the year. However, production delays had meant that most of Atari's stock of 600XL/800XL machines had hit retailers too late to compete against the C64 over the Christmas 1983 period, and Atari never managed to catch up with its rival from this point on. Coupled with the collapse of the 2600, Atari was on a slippery slope, and would never again scale the heights of its ascendancy under founder Nolan Bushnell. Despite these problems, the Atari 800XL remains the company's most successful 8-bit computer.

Atari soldiered on under Tramiel with some modifications to its 8-bit computers, such as the XE range and the XE Game System, released in 1987 as a competitor to the NES. In 1992, with its 16-bit ST home computer locking horns against Commodore's Amiga, Atari finally dropped all support of its 8-bit line, 15 years after the series' conception and long past the peak of its popularity. Brilliant and technically ahead of their time, Atari's 8-bits tried to be jack of all trades but fell short of winning the battle with Commodore or Apple. Perhaps their potential as a gaming platform was never quite realised. "Although the Apple II was the obvious target, we also conceived of the 800 as the next-generation gaming machine," says Joe Decuir. "In my opinion it had no peer until the NES came out five years later in Japan." Adds Tim McGuinness: "We still use Atari technology in today's PCs. Our MS-DOS floppies use Atari DOS format. USB is the grandson of Atari Serial, the interface between Atari peripherals." Now that's certainly something to think about.



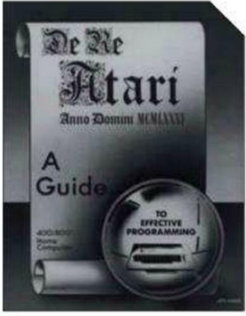
» *Ballblazer* and *Rescue On Fractalus!*. Two groundbreaking titles that were developed by Lucasfilm Games on Atari 8-bit computers.





» Third-party support from publishers like Synapse, Epyx, Datasoft, First Star and Sierra was a great boost to the Atari home computer software catalogue.

DE RE ATARI
A long-held popular myth is that Atari deliberately held technical information on its 8-bit computers from third-party programmers, so that its internal developers would have an advantage. It's a rumour that ex-Atari software developer Chris Crawford (of *Eastern Front* fame) is eager to quash. "When the 400/800 were released, Atari executives assumed that the technical details of those machines would be kept secret, as they were with the VCS. Everybody in engineering knew that was absurd, but it took a while to convince them it would be better to encourage outside software developers. What did the trick was the early press reviews saying that the 400/800 were great machines but didn't have as much software as the Apple II. In December 1979, they issued a memo saying all technical documentation was now publishable. I had a number of friends in the software community and got on the phone to them. They wanted photocopies of the documentation, which I ran off myself and shipped to them. Thenceforth, all you had to do to get the documentation was to ask. We sent out exactly the same documents that we ourselves used. There was never any attempt to hold anything back after that. However, the documentation was not easy to understand. By December 1980 there were enough developers that I proposed a Software Development Support Group, to assist developers both inside and outside Atari. We wrote *De Re Atari* to make the documentation easier to understand." This legendary tome, published in 1982, was an invaluable aid to programmers like Archer Maclean, who likens reading it prior to creating *Dropzone* to a 'religious experience'. "If we'd started the Support Group sooner I think we could have beaten Apple to become the top 8-bit machine, and fended off the C64," says Chris. "But we didn't, which might be a good thing. If we'd beaten Apple, I might not be typing this on my Macintosh!"



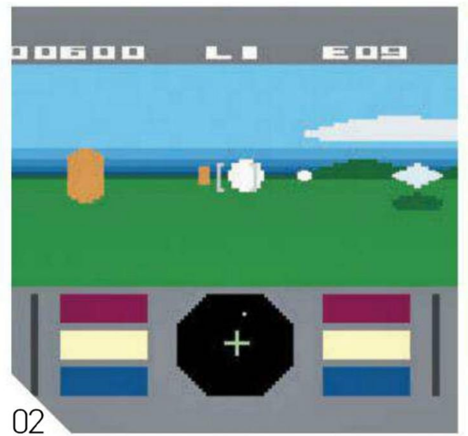
THANKS TO Tim McGuinness and Mike Cartledge for supplying several machine images, and soundhog for the loan of Atari software.

ATARI 800XL

PERFECT TEN GAMES

The Atari 8-bit personal computers were privy to some of the most impressive games of their time, and the Atari 800XL is still a great platform on which to experience them. Here's a selection of ten of the finest titles to whet your appetite. If we've managed to miss any of your favourites then feel free to let us know by visiting the forums at **www.retrogamer.net/forum**


01


02


03


04

STAR RAIDERS

» **RELEASED:** 1979
» **PUBLISHED BY:** ATARI
» **CREATED BY:** DOUG NEUBAUER
» **BY THE SAME PUBLISHER:** QIX

01 **Hugely influential to many of those that witnessed it on Atari's fledgling personal computers, *Star Raiders* was the title responsible for shifting more Atari 400/800 machines than any other.** The granddaddy of the *Elite*-style 'space opera', it was also the world's first free-roaming first-person perspective game. Updating the generic '*Star Trek*' games played by many a college student on mainframe systems, it was a striking mix of strategy and fast, immersive graphics that effortlessly sucked players into its universe. Criminally, the game's creator, Doug Neubauer, didn't make a single penny from *Star Raiders*, which he created in his spare time while he was employed as an Atari design-engineer.

ENCOUNTER!

» **RELEASED:** 1983
» **PUBLISHED BY:** NOVAGEN/SYNAPSE
» **CREATED BY:** PAUL WOAKES
» **BY THE SAME PUBLISHER:** MERCENARY: THE SECOND CITY

02 ***Encounter!* was so good that when Jeff Minter first saw the game demoed at a computer trade show he hastily convinced author Paul Woakes to make it a full commercial product, giving birth to software house Novagen and paving the way for *Mercenary*.** Playing out the mechanics of *Battlezone*, at what seems like around a thousand miles per hour, and with filled, solid objects zooming in and out of the screen, *Encounter!* was a technical marvel. And the impressively scary 'warp-sequence' between levels, which flings hundreds of enormous ping-pong balls at you while you struggle to avoid a collision, will still have you squirming in your seat like an Olympic rower with a scorpion in his pocket.

RAINBOW WALKER

» **RELEASED:** 1983
» **PUBLISHED BY:** SYNAPSE
» **CREATED BY:** STEVE COLEMAN
» **BY THE SAME PUBLISHER:** BRIMSTONE

03 ***Rainbow Walker* is a unique and extremely playable title that is totally exclusive to the Atari 8-bit systems.** Borrowing the colour-filling mechanics of *Q*Bert* and transposing them onto a chequered pseudo-3D scrolling play-field, its impressive z-axis scrolling utilises the Atari's unique graphic capabilities very nicely. Guiding our rotund hero Cedric across a series of aerial platforms fills in squares with a spectrum of colours, and moving up or down at either vertical extremity scrolls the patterned play-field towards or away from you. Enemy creatures can, and will, undo all of your hard work and must be avoided or 'pushed' off the rainbow by scrolling it until a gap appears beneath them. An attractive game and a really clever concept.

PASTFINDER

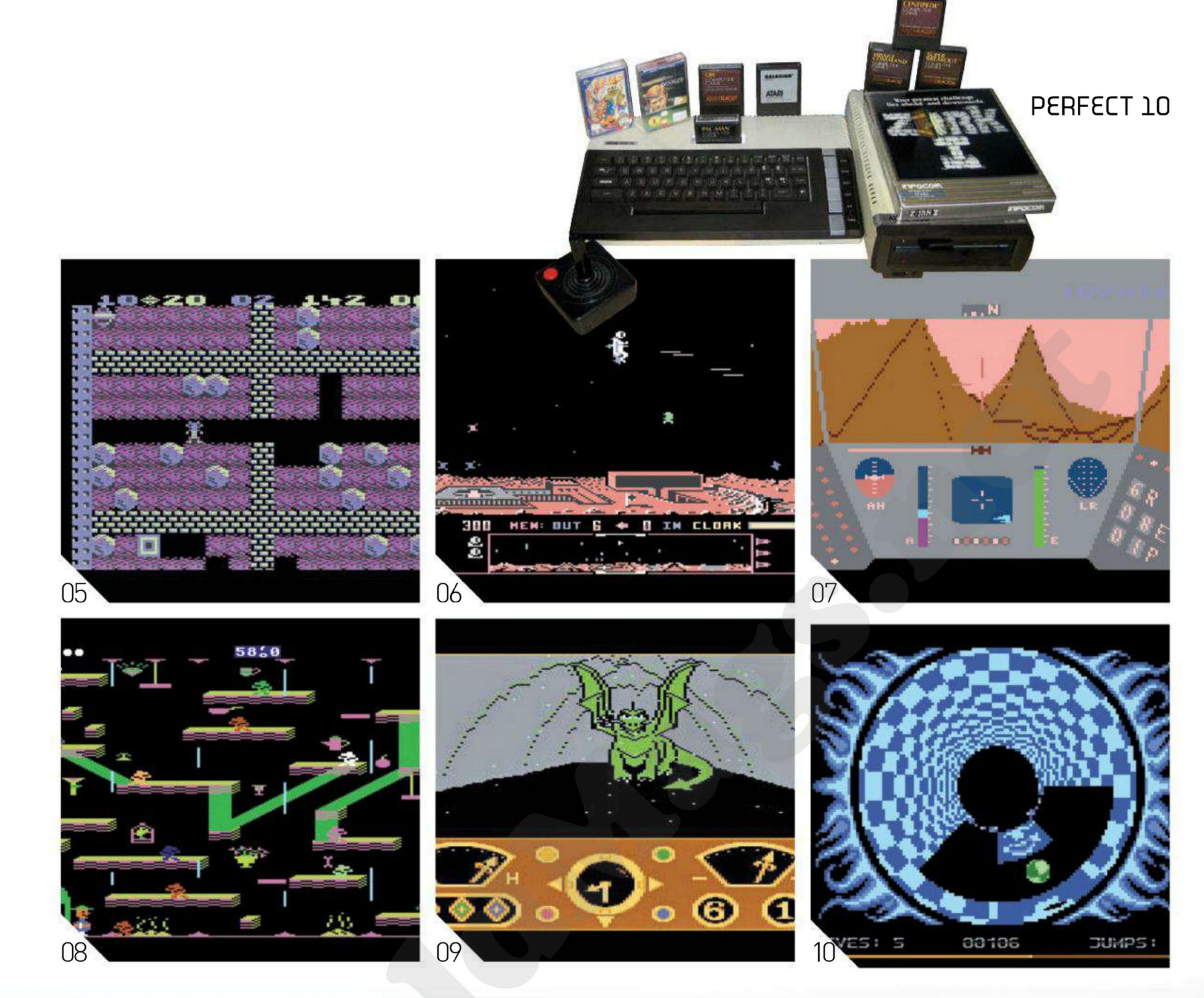
» **RELEASED:** 1984
» **PUBLISHED BY:** ACTIVISION
» **CREATED BY:** DAVID LUBAR
» **BY THE SAME PUBLISHER:** GHOSTBUSTERS

04 **Despite a limited release by Activision – it remains one of the hardest titles to track down – *Pastfinder* is a great progressive shoot-'em-up that makes good use of the Atari's unique hardware.** Helming a frog-like craft (the 'Leeper') your task is to explore a hostile planet while hunting down long-lost alien artefacts. The scrolling forced-perspective terrain, resembling a top-down *Zaxxon*, is highly atmospheric, with great use of shadows, and the Leeper is a wonderfully charismatic creation with a superb control 'feel'. There's a huge *Star Raiders*-style strategy-grid to traverse in search of ancient loot, and guiding your 'space hopper' through the radioactive wasteland at breakneck speed is enormous fun.

BOULDER DASH

» **RELEASED:** 1984
» **PUBLISHED BY:** FIRST STAR SOFTWARE
» **CREATED BY:** PETER LIEPA
» **BY THE SAME PUBLISHER:** ASTRO CHASE

05 **At the risk of being predictable, we couldn't really leave *Boulder Dash* out of our Perfect Ten.** Developed for the Atari 400/800 by Peter Liepa and Chris Gray, its beautiful gameplay, inspired by *The Pit*, an arcade game co-created by Andy Walker of Taskset fame, has been enthralling generations of gamers on various platforms for over 20 years, and its hero, Rockford, is a bona fide gaming icon. The dynamic physics, the predetermined 'rules' for enemy creatures, and the thought-provoking puzzle-like nature of the game were all masterstrokes. This, then, the original creation in the lineage, is a must-play, with some outstanding and very challenging levels, which greatly deserve revisiting.



DROPZONE

» **RELEASED:** 1984
» **PUBLISHED BY:** US GOLD
» **CREATED BY:** ARCHER MACLEAN
» **BY THE SAME PUBLISHER:** OUTRUN

06 With *Dropzone*, a young Archer Maclean took a large helping of *Defender*, a sprinkling of *Jetpac*, and cooked up a brilliant and blisteringly paced Jarvis-esque mega blast. Like a fine wine, *Dropzone* has aged remarkably well, and the original Atari version is most definitely the finest vintage on offer. Considerably bettering Atari's already very decent *Defender* conversion, Archer's magnum opus displays an incredible eye for detail and pushes the Atari hardware to the limit with its incredibly rapid smooth-scrolling, pixel-perfect collision handling, incredible particle effects and fantastic playability. Even in death the game rewards the player's ineptitude with a spectacular on-screen firework display.

RESCUE ON FRACTALUS!

» **RELEASED:** 1985
» **PUBLISHED BY:** ACTIVISION/EPYX
» **CREATED BY:** LUCASFILM GAMES
» **BY THE SAME PUBLISHER:** PITFALL!

07 If *Star Raiders* managed to shoehorn a small but significantly impressive corridor of space into an 8K Atari cartridge, *Rescue On Fractalus!* went a step further by cramming a whole planet into a 48K computer. Lucasfilm's first-person fractal flight-sim delivered an incredibly immersive experience, which many thought impossible to achieve. Its release was a defining moment for the Atari 8-bit systems it was originally designed for, wowing gamers on their first exposure to its amazing real-time landscape. The Atari's faster processor means that this is the definitive version of the game, running around one and a half times faster than the C64 conversion.

BOUNTY BOB STRIKES BACK

» **RELEASED:** 1985
» **PUBLISHED BY:** BIG FIVE SOFTWARE
» **CREATED BY:** BILL HOGUE
» **BY THE SAME PUBLISHER:** SCRAPER CAPER

08 Bill Hogue's excellent sequel to his classic *Miner 2049er* is an outstanding platform romp that improves on its predecessor by some distance. Bob's mine now has a satisfyingly solid isometric angled look, and there's a multitude of new contraptions to help or hinder our hero. With 25 stages – more than twice the number of the original – and some extremely devious screens with a proliferation of slides, pipes and teleports to scramble your brain, *Bounty Bob Strikes Back* will test your platforming skills to the max but have you coming back for more. And top players can glorify their achievements on one of the most polished and appealing high-score tables of all time.

THE EIDOLON

» **RELEASED:** 1985
» **PUBLISHED BY:** ACTIVISION/EPYX
» **CREATED BY:** LUCASFILM GAMES
» **BY THE SAME PUBLISHER:** TONY HAWK'S PROJECT 8

09 Probably the most ambitious, original and downright atmospheric title of Lucasfilm's fractal triptych, *The Eidolon* was scaring the nappy-filler out of gamers many years before *Doom* or *Resident Evil* were. By cleverly inverting the fractal mountains from *Rescue On Fractalus!* and *Koronis Rift*, Charlie Kellner created an incredibly engrossing first-person subterranean adventure with strange revelations and fascinating beasties lurking around every corner. The creatures themselves are all great characters, from comical lowly minions to the game's famously impressive dragon guardians. And you don't even want to know what monstrosity awaits you at the end of the final level.

YOOMP!

» **RELEASED:** 2007
» **PUBLISHED BY:** N/A
» **CREATED BY:** MARCIN ZUKOWSKI AND TEAM
» **BY THE SAME PUBLISHER:** N/A

10 Imagine playing *S.T.U.N. Runner* – apparently we're not supposed to mention *Trailblazer* – with a bouncing ball in a psychedelic tubular playing field to a stonking soundtrack. Actually, imagine no more. Just grab *Yoomp!* instead. This excellent title was created by a Polish programming team, and was inspired, according to its developers, by an old Bullfrog DOS game called *Tube*. Whatever its influences, however, this freeware masterpiece deserves to be experienced by as many players as possible, which is why it's been included here. Fire it up, grab a joystick, disengage your mind from the niggling background music of reality and prepare to enter the zone.



ATARI 800XL and the rest...

With so many British gamers constantly harping on about the ZX Spectrum, CPC 464 and Commodore 64, it's easy to forget that there were plenty of other classic machines that were worth visiting, as this 800XL spread proves

1 ACE OF ACES
2 EASTERN FRONT
3 REVENGE II
4 KORONIS RIFT
5 BOULDER DASH
6 DROPZONE
7 POLE POSITION
8 MERCENARY
9 SUMMER GAMES
10 ASTEROIDS
11 DEMON ATTACK
12 GHOSTBUSTERS
13 ATTACK OF THE MUTANT CAMELS
14 PASTFINDER
15 INTERNATIONAL KARATE
16 STAR RAIDERS
17 PAC-MAN
18 ARCHON II
19 BOUNTY BOB STRIKES BACK
20 MULE
21 RAID OVER MOSCOW
22 CONAN
23 SPYHUNTER
24 NECROMANCER
25 GHOST CHASER
26 BC'S QUEST FOR TIRES
27 THE EIDOLON
28 MR DO!
29 SHAMUS II
30 ARCHON
31 ELEKTRA GLIDE
32 BALLBLAZER
33 SHAMUS
34 THE SEVEN CITIES OF GOLD
35 KARATEKA
36 DEFENDER
37 GREMLINS
38 PITFALL II: LOST CAVERNS
39 ASTRO CHASE
40 MINER 2049ER
41 ROBOTRON: 2084
42 GYRUSS
43 SOLO FLIGHT
44 STAR WARS
45 ZAXXON
46 FORT APOCALYPSE
47 ALTERNATE REALITY: THE CITY
48 ENCOUNTER!
49 SPINDIZZY
50 THRUST
51 BRUCE LEE
52 RESCUE ON FRACTALUS!
53 SPY VS SPY
54 THE GOONIES
55 MONTEZUMA'S REVENGE
56 TAPPER



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(C) 1982 IMAGIC
RADIATION
ACTIVISION
ARCHON II
ADEPT
TWO-PLAYER
CHAOS FIRST
ACID RAIN STORM
FOOD OUTPUT UP
ENERGY REDUCED
JUMP! SUCKER
WHEELS
SPEED
SCORE
HIGH-SCORE
TITLE: CAPTAIN
LEVEL: MASTER
LEVEL:BLACK
SCORE
FUEL
BONUS
NAVATRON
TIME
JEWELS
WHITE
BLACK
LIVES

THE CLASSIC GAME

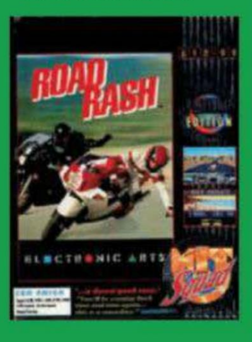
ROAD RASH

Electronic Arts took road rage to new dizzying heights with its violent Super Hang-On-style racer. Stuart Hunt puts mettle to a pedal, a fist through a helmet visor and gets aggressive after contracting a nasty bout of Road Rash





- » **PUBLISHER:** ELECTRONIC ARTS
- » **DEVELOPER:** IN-HOUSE
- » **RELEASED:** 1991
- » **GENRE:** RACING
- » **EXPECT TO PAY:** A FEW QUID





» The ET remake eventually reached its final day of shooting.

If there's one thing that grates us as gamers, it's elastic-band physics. It's just a lazy and unfair method of trying to keep a videogame 'exciting'.

» Some of the collisions will see your driver landing in the next state.

As anyone who's completed the ridiculous final level on *Driver* will appreciate, it's not 'exciting' at all. It's just an infuriating trope that's predominantly plonked into driving games to allow a computer opponent that you've buried into a building at 90 miles an hour to miraculously re-materialise from a side road, clip your wing mirror and send you rocketing into the stratosphere. *Mario Kart 64* is another fine example of how this evil, evil mechanic can annoy beyond measure. It's not clever and we don't like it.

We've lost count of the number of times we've sent Toad careering over a cliff with a well-timed red shell, witnessed ourselves collect a batch of speed-boosting mushrooms and used them instantly, only for the annoying boy fungi to overtake us two seconds later. You might be beginning to wonder where we're going with all this digression. In fact, we're starting to wonder. Ah, *Road Rash*. That's right. Well, the point we're trying to make is *Road Rash* is a game that pulls at that elastic band so much it snaps.

In *Road Rash*, when you cruise past someone on the tarmac and launch a fist into their temple, they go down like a sack of spanners and, more importantly, they stay down. None of this Lakitu cloud fishing-rod malarkey, or God stepping in to pick you up and supplant you on the track a few yards further on from the collision. Nope, when bikers fall to the floor the little position tally drops a



» Yep, that's definitely gonna sting.



» "Woohoo! Yeah 15th place, eat my shorts Grubb!"

digit, and your opponents have to dust themselves off and walk to their smashed, scratched wrecks with a probable dislocated shoulder. So bless you, Electronic Arts. We know you've come in for a lot of stick over the years, but hey, at least you went and made a racing game that, admittedly, borrowed almost 98 per cent of its gameplay from *Super Hang-On*, but look, *you* added the fighting, and the police, and invented the names Griff, Gruff, Benon and Larry, and yes, *you* can be seen to be setting a great example of how to get competition AI absolutely spot-on in the racing genre.

To sum up *Road Rash*, it could best be described as a *Fight Club* road trip, or maybe even the videogame version of that Ice Cube action film *Torque* – you know that really bad one – had its director actually decided to direct any action into it. It has a lovingly simple concept: race from point A to point B, by either adhering to the conventional MotoGP rules of racing, or by adopting the Queensbury Rules method. Of course, the game really doesn't hide which category of racing style it would prefer you use. After all, the game's called *Road Rash*, which is the colloquial term given to a tarmacian carpet burn, so we can gauge that it's probably expecting you to spend a bit of time apart from your bike.

But perhaps our favourite thing about the game, the absolute greatest thing about it, is that it always reminds us of that awful five-minute videogame challenge show *Head To Head*, which aired on Sky television back in the Nineties. It was hosted by videogame veteran Violet Berlin and pitted two kids against each other for the lame prize of going into school the following day and receiving an hour's worth of notoriety



» They be on a relaxing Sunday afternoon drive, but you can bring them into the action too by smashing up their nice yellow car.

from their chums. Of course, apart from 2D beat-'em-ups, there's not much variety in two-player videogame spats that fit inside a five-minute gap, so the producers had no choice but to use their imagination. This creativity led them to having nearly every other episode feature a duel on *Road Rash II*, but for me that made the show more bearable. After you looked past Violet's white, anime haircut, watching those two kids frantically beat

WHEN YOU CRUISE PAST SOMEONE AND LAUNCH A FIST INTO THEIR TEMPLE, THEY GO DOWN AND THEY STAY DOWN

each other up using baton-wielding bikers was pure telly gold.

The irony of course was, like *Head To Head*, there appears to be very little reason or point to *Road Rash*'s narrative. So, in these instances, we always find it best to try to have a stab at lending our own plotline. Ours was imagining that our poor avatar was intentionally left out of the memo loop about correct attire before race day. Consequently, everyone turns up to the race in blue and yellow leathers, with the exception of your chap who's dressed as the red Power Ranger. Try planting this plot idea into your head when you play it. It really heightens the gameplay and allows you to sympathise with your rider. Our theory that your rider is solely participating in the race with intentions of dishing out some retribution is further backed by the fact that whatever position he eventually finishes in a race he will always wave his hands jubilantly in the air. Does that really sound like the reaction of someone who's racing to win?



» "And, as you can see from the replay Bob, that this talented young rookie catches the ball before landing in the end zone."



» It's quiet at the start line, but it's all going to end in tears.

DEVELOPER HIGHLIGHTS

MULE
SYSTEMS: VARIOUS PLATFORMS
YEAR: 1983

SKATE OR DIE (PICTURED)
SYSTEMS: VARIOUS PLATFORMS
YEAR: 1987

THE SIMS
SYSTEMS: PC
YEAR: 2000



EGGS AND RASHERS MAKE A 3DO-MLETTE

Two *Road Rash* sequels appeared on the Mega Drive and both would subtly tweak at the action by adding new locales and weapons. The biggest shift in the series would emerge in 1995. Released late in the 3DO's life, *Road Rash* was a re-invention of the Mega Drive classic that kicked the cartoon look into the gutter in favour of gritty, digitised visuals. Battling it out across a fully 3D environment, the game would replicate perfectly the feel of being a road hog, speeding across the road with your carburettor chugging out smoke and pieces of broken visor and skull entwined in your greasy mop. Couple this with the unwelcoming ambience of its scummy, between-race bars, where you could wax lyrical with some of the competition's super-deformed giant fleshy eggs, and your time tarmac-duelling with the circus freaks felt all the more competitive.



MAKING OF...

CRYSTAL CASTLES

When Franz Xaver Lanzinger created a game as distinctive and memorable as his own name, he bewitched many a gamer. Paul Drury ventures inside the walls to discover how the stately Crystal Castles was built

» Dave Ralston's designs for the 'Nasty Tree' screen.

Franz thinks carefully before answering. "Well, I had studied his work. I have some of his pictures on my wall in the office right now. And that one maze called Impossible Staircase uses the same technique of building something in 3D that looks possible but isn't... Yes, Escher was a very strong influence."

Retro Gamer has tentatively ventured into chin-stroking territory. The distinctive visuals of *Crystal Castles*, those strange 3D structures that rise majestically from a flat plane as each level begins, do recall the work of the Dutch graphic artist famed for his playfulness with perspective. Is this perhaps the first example of a game designer with clear artistic ambition?

"No I didn't think of myself as an artist back then," chuckles Franz, self-consciously. "I was just trying to make a fun game. Deal with the technical issues and fix the bugs! I was and still am a gamer and it's all about that."

Sorry, bearded academics, but Franz is one of us. After dropping out of a mathematics degree at the University of California at Berkeley to pursue a career in scientific research, Franz had been leading a double life. "I was programming by day, playing arcade games by night. I had a group of friends and we were playing a lot of games in 1980 and 1981. One of our group, Brian McGhie, got hired by Atari because he was part of a focus group recruited from a local arcade field test. He recommended me. And Atari were the big cajones, so to speak. Like working at Disney if you wanted to do animation."

While Franz's prowess on *Centipede* must have looked good on his CV, it was his experience in coding in assembly – still the primary tool for developing arcade games in those pre-C days – that landed him the post. He joined in early-1982 and began work on the project that over the next year and a half would evolve into the sparkling *Crystal Castles*, a game with no obvious antecedents. Well, the gem-collecting premise may owe something to *Pac-Man*'s pill-popping, but discovering it began life as a follow-up to *Asteroids* comes as a surprise.

"It was internal politics. In order to get a project off ground, you had to choose an approved project from the 'Big Book'. Atari did these annual brainstorming sessions for the entire engineering department and would write down game ideas in this book. When I arrived, I looked through the book and picked one."

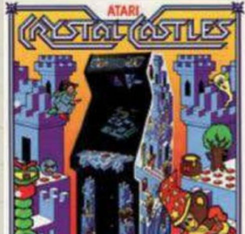
Franz's fingers fell on *Toporoids*, a re-imagining of Atari's seminal vector blaster. The new employee was without a full development system for the first few months and so spent his time mucking about on a mainframe, creating 3D backgrounds for the space-based shooter – the 'topology' part of the game's rather strained title.

"Almost from the beginning, the backgrounds looked like they would in the final game," he says. "They were data driven – I'd type in numbers for the heights and colours of these 3D structures, the timing of lifts, the placement of tunnels and so on. It evolved from day to day. I remember having 2,000 versions of the game. I'm not kidding! Every day I'd make four or five versions. I'd try each one out and an hour later, do another one."

Experimentation was the key here, as was the addition of a small ET-like creature, which allowed Franz to scurry across the architecture of his mysterious isometric world. Once he had scattered gems across the landscape for the little fella to collect, he could see the potential for a very different sort of game than interstellar rock reduction.

"That's when it took a different direction to *Toporoids*. You could see there was a fun game in there, but we didn't have a theme or enemies. A group of us threw around ideas and came up

IN THE KNOW



» **PUBLISHER:** ATARI
» **DEVELOPER:** FRANZ X LANZINGER
» **RELEASED:** 1983
» **FROM THE SAME PUBLISHER:** MAZE GAME
» **GENRE:** SHOOT-'EM-UP
» **EXPECT TO PAY:** £750+ FOR A MINT CABINET



» Bentley's nemesis got her name when Franz was driving down Highway 101 and saw a sign for 'Mathilda Avenue', which he thought 'sounded like a witch'. He played around with it a little and the evil Berthilda was born…

WITH A LITTLE HELP FROM HIS FRIENDS

While all the game code for *Crystal Castles* was written by Franz alone, he did have some input from the two graphic artists Atari employed at the time. "Barbara Singh did the bulk of the motion objects and Susan McBride also did a few," he notes. "You'd call them sprites now – the bees, trees, ghosts and, of course, the bear." This female touch may go some way in explaining Bentley's rather effeminate garb of red boots and red sash, topped off with a rather fetching hat (which, to be fair, does provide five seconds of invulnerability from enemies, including, hopefully, the fashion police).

Fellow Atari game designer Dave Ralston also helped design some additional mazes after prototypes were placed in local arcades. "At the first arcade field test there were 12 different mazes that I had designed and feedback from players was that they wanted more. More variety. Dave helped with the more complicated mazes you see later in the game. I still have his original drawings. I plan to give them back, erm, any day now!"

Fortunately for us, Franz has kindly scanned these sketches before returning them to their author and **Retro Gamer** can exclusively publish them here. We particularly love the scribbled message left for Franz… hope you had a good afternoon, Dave. Nice work.

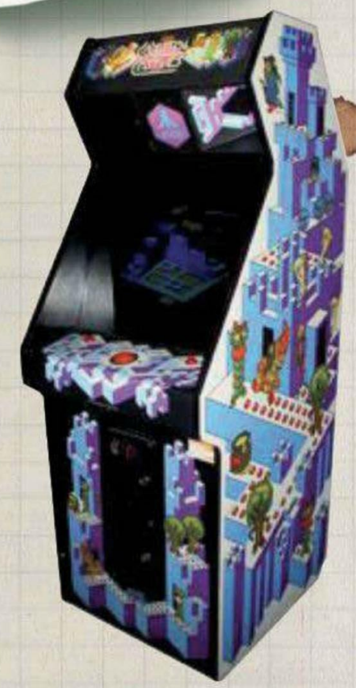
with a fairytale theme. The witch, the moving trees, that idea of them being alive like in the *Wizard Of Oz*… and the bear. You find them in the woods."

And we all know what bears do in the woods, though the unlikely hero of this tale was careful not to offend. "He was to be called Bear Braveheart till someone in marketing decided it was politically incorrect because of Native Americans," says Franz. "There was something going on with the Atlanta Braves at the time and the word 'Brave' wasn't considered kosher. They had a competition open to all in engineering to rename him and Bentley won. Not my suggestion!"

Our newly christened, PC-friendly leading bear was now free to snaffle up the tempting crystals and progress through the game's 37 screens. He wasn't without competition though, as equally avaricious gem-eaters roam the mazes, though it's possible to eliminate them mid-gobble. Add to this Berthilda on her broomstick, wandering trees, crystal balls and an angry swarm of bees and things can get pretty crowded. This is when you thank the game's incredibly speedy and precise controller for allowing you to outmanoeuvre your adversaries with a well-timed spin of the glowing trackball.

"I was playing a lot of *Centipede*, and *Millipede* was in development in the lab next door. I liked the trackball controller. I felt comfortable with it and the management said I could choose – trackball or joystick – so that's what I went with and didn't really think of the implications. In retrospect, having a trackball is a hindrance as it's hard to get the feel right with a different controller…"

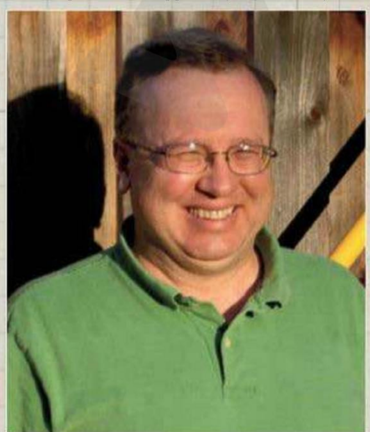
True, designing the game around a joystick may have made future home conversions easier to implement, but many of the nuances in gameplay – the way Bentley can take corners at a blistering pace, his pirouetting descent

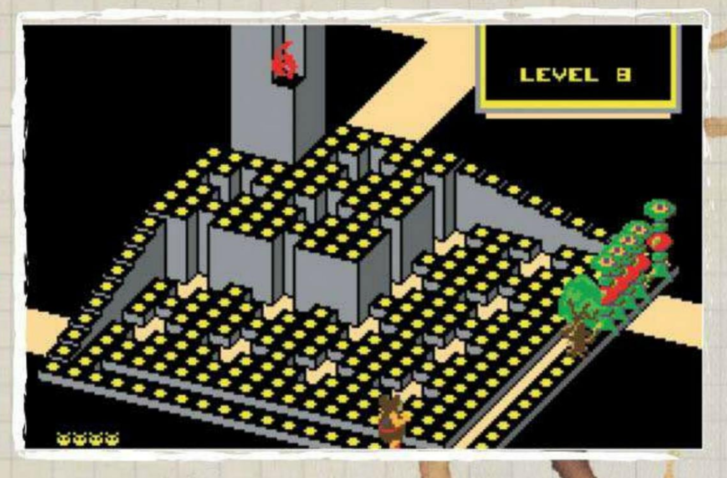


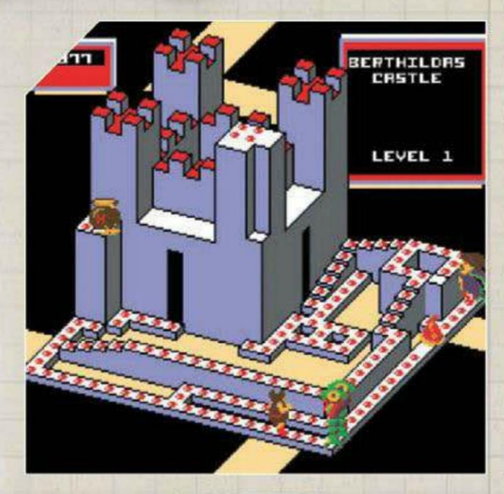
» The ornate cabinet and that lovely glowing trackball.

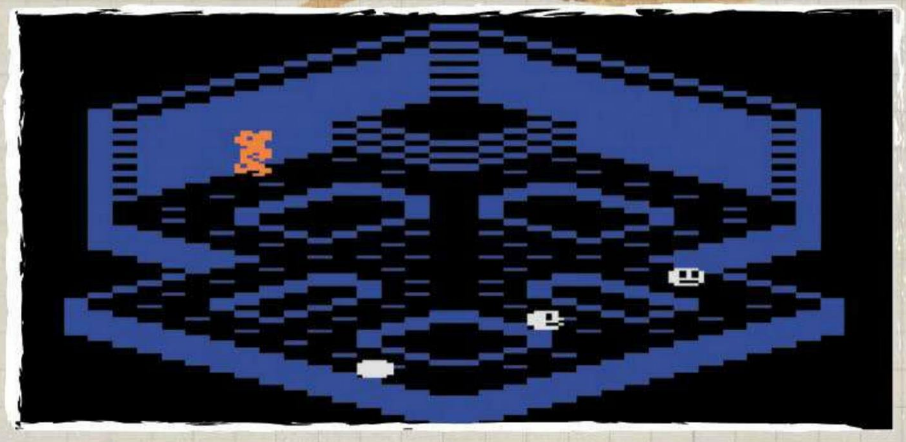
"In 1983, I spent $2,000 in the arcades. Being a gamer and being part of the gaming culture allowed me to make good decisions about game design" FRANZ KEEPS IT REAL

» A beaming Franz, still making games a quarter of a century on.









» Converting *Crystal Castles* for the home was never easy, but this valiant VCS effort did actually support the console's trackball controller.



of crystal encrusted towers and the rhythmic swirls of expert players as they swallow up fields of gems with some nifty finger work – all rely on the esoteric charms of the trackball. Besides, Franz was making the best game he could for gamers of the day and though he'd crossed over into game development, he wasn't one to forget his roots.

"I felt it was important I kept up my arcade playing. In fact, I remember using a tax write-off of $2,000 for money I spent in arcades in 1983! Research and development. I don't feel bad about it. I could have played all the games I wanted to at work for free, but I felt it was important to go to the arcade. Being a gamer and part of the gaming culture was helpful. It helped me make good decisions about game design. It pushed me in the right direction."

His immersion in that culture, where your status was determined by the position of your initials on the high-score table, is beautifully evident in the very architecture of *Crystal Castles*. The three-lettered tag of the day's best player is incorporated into the towers of the opening level and Franz's favourite screen, entitled Hidden Spiral, is formed from the initials of three of his gaming friends, including Brian 'BBM' McGhie who'd helped him break into Atari in the first place. Look closely at Berthilda's Palace and you'll see 'EDG' and 'MAR' carved into the floor, standing for Eric Ginner and Mark Robichek respectively, both high-scoring heroes from the Golden Age.

"I watched Eric Ginner play *Tempest* and even with the scheme that let the advanced players select which level to start from, it still took him half an hour to get to the level of play he wanted to be at," recalls Franz. "I wanted you to get there right away! That was part of my motivation for putting the warps in *Crystal Castles*. Plus, I wanted to do something to keep the game times low. Put something in there to ensure the game time was five minutes or less. Basically, monetary greed!"

From his hours in the arcade Franz learned how to meet the needs of the expert, while not alienating the newbie and hid three warps at strategic junctures in the game. And of course, everyone loves uncovering secrets. The first time you guided Bentley to the rear corner of the opening screen, jumped, and then watched in wonderment as your furry friend rocketed into the ether leaving those early levels behind was a revelation for many a young gamer.

Franz smiles. "I wanted something you'd learn. The beginner wouldn't know about them and eventually he'd get a message about the warps. Most people think you had to read about them in magazines, but I put messages in the game. If you play straight through and get past the place where you can warp to, there's a message telling you."

This innovative feature pre-dated *Mario*'s Warp Zones of course, but it wasn't the only piece of prescient thinking. *Crystal Castles* is the first arcade game to offer a distinct ending. This was something very new for

THIS IS THE END



Franz had to fight his corner when it came to having an end to his game, but the opposition didn't come from the players pumping in the quarters. "They were fine with it," he explains. "Basically, management had had huge success with games like *Asteroids* and *Centipede*, which didn't have endings, so why rock the boat?" Ever the diplomat, Franz eloquently stated his case through a detailed two-page memo, arguing the benefits of giving *Crystal Castles* an end screen. It's a fascinating historical document, touching on ideas such as if videogames are aspiring to tell stories, they should have satisfying conclusions in the same way novels do, and we are delighted that Franz has now chosen to publish his 25-year-old document on his website. Go to www.actualentertainment.com/crystalcastles where you can read it in its entirety and also download the very sweet *Gubble HD*, for a price of your choosing. While you're on the wonderful web, please visit Mark Alpiger's www.classicarcadegaming.com for his superlative pages on *Crystal Castles*. "He's a tremendous player and he really knows the game. Better than I do, in fact," acknowledges Franz. "He's been a great inspiration over the years. His website is amazing. A lot of great information. And yeah, I've seen the footage of him playing *Crystal Castles* with his feet on the extras of *The King Of Kong* DVD."



» Franz tackling his own creation in 1986. Photo courtesy of *CC* aficionado Mark Alpiger.



an action game and Atari's top brass needed convincing.

"Management saw that they got a lot of free publicity from people playing *Asteroids* and *Missile Command* for days on end," says Franz. "It was all about marathoning, but I felt strongly that the score in a game should be meaningful. I felt it was important to have an ending…"

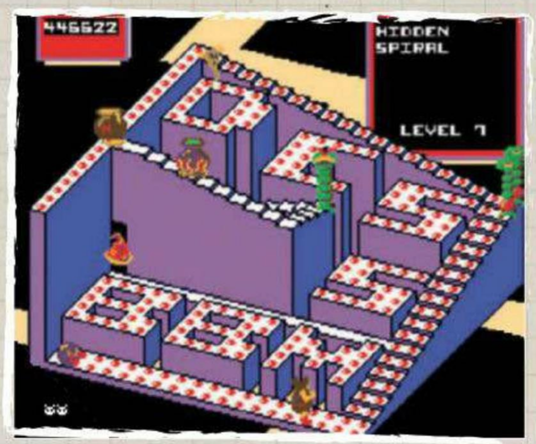
Franz persuaded his bosses through a detailed two-page memo (see This Is The End) and thus those triumphant players who beat Level 10, Screen 1, are rewarded with a congratulatory message, a rating determined by how many lives they have left ranging from 'Amazingly Good' to 'Video Wiz', a bonus score based on speed of play and a rather fancy animation that fills the screen with reproducing rectangles.

It's another sweet touch in a game full of little details. The outlandish use of pink, maroon, peach and pea-green in a palette that would please Laurence Llewellyn-Bowen (Franz exclusively reveals he put a counter in the game so the colour scheme changes every 1,000 games). The naming of each level adds real atmosphere, as you first discover Berthilda's Dungeon, the ominous Doomsdome or the helpful hint of Hidden Ramp. The cute cartoon speech bubble that contains Bentley's last words when he cops it. And then there's the cabinet itself, complete with illuminated trackball and elaborate side-art.

Crystal Castles turned heads when it arrived in 1983, but it was to be Franz's only contribution to the arcades he so loved. He spent the following year working on a *Gremlins* arcade game, spending time on the film set and meeting Spielberg, but then left Atari over a dispute about the lack of residuals paid to coin-op developers for sales of home conversions of their games. It remains his biggest regret.

He left the industry for five years before joining Tengen in 1989, where he converted *Toobin'* and *Ms Pac-Man* for the NES. He went on to form Bitmasters, who released *Krazy Kreatures* and *Rampart*, before stepping up to the SNES for *Championship Pool* and *Final Four Basketball*. Then in the mid-Nineties, he teamed up with old arcade buddies Mark '*Frogger*' Robichek and Eric '*Centipede*' Ginner to set up Actual Entertainment. "The idea was to do a sequel to *Crystal Castles*," he says. "We couldn't get the rights, so did a game that was similar but different enough to avoid legal problems. And I was very happy with *Gubble*. I think it's a great game. In fact, I recently did *Gubble HD: Anniversary Edition* and I'm trying to get it out on other platforms. I think the DS would be a good platform for *Gubble*."

So the seasoned game designer has returned to the spiritual successor of the game that launched his career. Does his first-born remain his favourite, though? Franz laughs. "Yes. It had the most impact and originality and I'm proud of it. I saw it in *The King Of Kong*, which was a big thrill. Actually, *Crystal Castles* was the first game I ever wrote. I'd done a lot of programming – I'd been doing it since 1971 – but nothing I did at school or work was a game." Debuts don't come much more auspicious…



» The Hidden Spiral stage contains the initials of fellow gamers Desiree McCrorey, Sam Mehta and Brian McGhie.



» Franz played around with perspective on the game's final screen, which was entitled rather appropriately 'The End'.

DEVELOPER HIGHLIGHTS

MS PAC-MAN
SYSTEMS: NES/SNES/GENESIS
YEAR: 1990

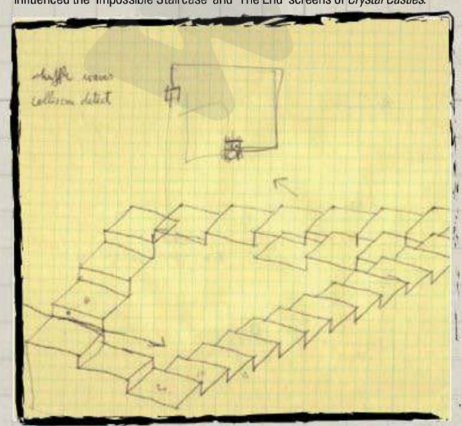
KRAZY KREATURES
SYSTEM: NES
YEAR: 1990

GUBBLE (PICTURED)
SYSTEM: PC
YEAR: 1996



"Atari were the big cajones. It was like working at Disney if you wanted to do animation" FRANZ ON GETTING TO HANG OUT WITH THE BIG BOYS

» This rough sketch by Franz shows the debt he owed to Escher and clearly influenced the 'Impossible Staircase' and 'The End' screens of *Crystal Castles*.

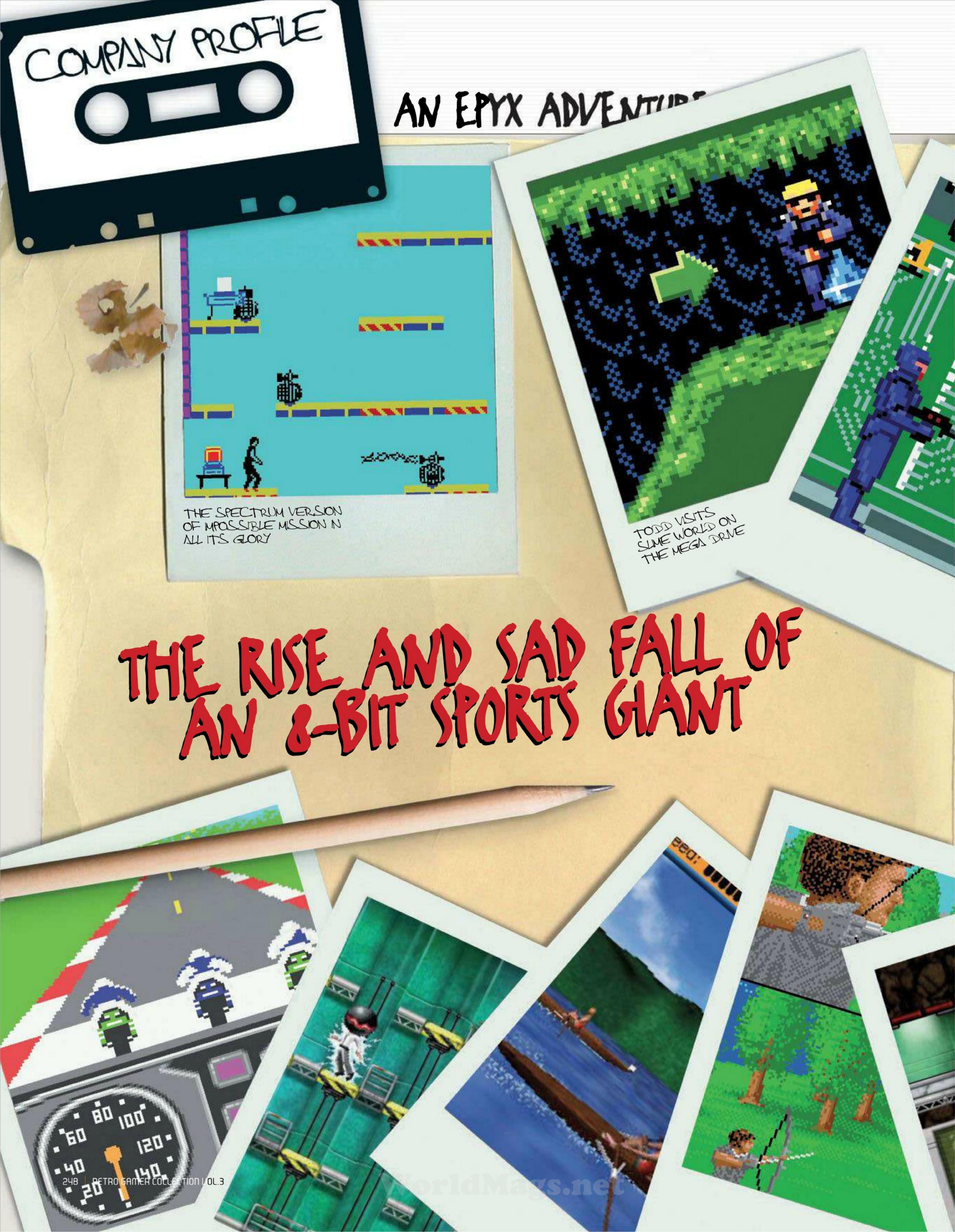


» The spiritual sequel of *Crystal Castles*: *Gubble HD*, available from Franz's website www.actualentertainment.com.



» Having fought and won, the player is rewarded with plenty of points and lots of blocks…





THE SPECTRUM VERSION OF IMPOSSIBLE MISSION IN ALL ITS GLORY

TODD VISITS SLIME WORLD ON THE MEGA DRIVE

THE RISE AND SAD FALL OF AN 8-BIT SPORTS GIANT





AN EPYX ADVENTURE

From small acorns grow big trees and so proved American developer and publisher Epyx. David Crookes looks at a software house created almost by accident, and charts its growth into one of the world's finest videogame developers



» This image, courtesy of www.classicgaming.com/gotcha, shows Epyx's doomed VCR venture.

Impossible Mission. California Games. Chip's Challenge. Make just one of those games and you'd be prouder than a peacock awarded first prize in a bird show and popped on the cover of Vogue. Make all of them, add a host of gems from Pitstop to Electrocop, publish such classics as Barbarian then put together a piece of hardware as technologically fine as, say, the Atari Lynx and people would be making wider doors in order to fit your swollen head through. That's if they want you in the room at all, given that you'd be bragging so much about your impressive catalogue.

That, however, is not to say that anybody at Epyx was bigheaded. Far from it. The company grew from humble beginnings and, befitting a publisher created on a whim, never quite got to grips with its finances. It had its share of problems, but masking all of those was a series of highly rated games, some of which stand out as being among the finest slabs of digital entertainment ever created by man. And until robots begin to make games without human intervention, the situation is likely to remain that way for some time to come.

Epyx was formed by Jim Connelley and Jon Freeman in 1978, the first game being the war title *Starfleet Orion*. A year earlier, Jon was working as a temp and he had met Susan Lee-Merrow, a keen *Dungeons & Dragons* player who invited him along to one of their gaming sessions. It was there that he met Jim, one of the group's two Dungeon Masters, and he decided to become a regular player.

Over time, the pair became friends. Jim, who was into his *D&D* role, bought a Commodore PET, which he used to help him with his Dungeon Master administration. But he needed to get back the money he'd paid for the computer and decided that it would be a good idea to create a game. He asked freelance writer Jon if he would help.

Over a couple of months, Jon developed and worked on its design while Jim took that framework and programmed the game in BASIC. It was a two-player affair with a flaw – both could not sit in the same room and play. One would have to make their move, leave the room and let the other enter for their turn. It was good for keeping fit, yet not ideal for fluid gameplay.

Yet with a few weeks to go before Christmas, the title was ready and the pair set up Automated Simulations, placed advertisements in magazines and found themselves with a publishing company on their hands. To their delight, they also discovered that, despite the primitive graphics consisting of dots for ships and asterisks for explosions, people were buying the game and so it was ported to the Apple II and the TRS-80. "The PET and the TRS-80 version was exactly the same," says Jon. "Except everything was flipped or mirrored because the 0,0 points on the two machines were in different corners. I think the Apple version might have had tiny little icons for ships instead of just dots, but otherwise it was identical except for media."

A year later, a sequel, *Invasion Orion*, was produced, putting right the two-player problem of the original by having a computer opponent, but it wasn't long before they began to draw on their love of *Dungeons & Dragons*, producing the adventure *Temple Of Apshai* in 1979.

Due to the limitations of the computers at the time and also the *D&D* background of the creators, the game was rather unusual in that the numbers of the rooms in the game would carry a hint-filled descriptive entry in the manual that came with it. ("A droning sound can be heard," says the entry for room 4). But for Jim and Jon, the manuals were as much a labour of love as the games, often compensating for the lack of graphical prowess. The dots and asterisks of *Starfleet Orion*, for instance, were largely ignored by players, given the 34-page manual that came with it, mapping out game scenarios and storylines in detail. But with the advanced machines came the tweaks – a port of *Temple Of Apshai* to the C64 had better graphics, for instance.

DAVID MORSE

David Morse, the founder and president of Amiga and the former CEO of Epyx, sadly died in November 2007, aged 64. He had left his role as vice president of marketing at Tonka to take the Amiga job before joining Epyx in 1983, and he later helped form the 3DO company. Morse left his wife Lorraine of 42 years, sons Mark and Chris, and grandchildren Delaney, Julia, Kate and Caroline.

"David was a leader, a partner, a father, a husband, a friend, and he was excellent at all of those," says Dave Needle, the man who helped him create the Lynx. "I count myself lucky to have been one of the many people he helped grow in both our personal lives and our business ventures. This was a great man. The world needs more like him. He leaves a legacy of family and friends that will forever remember him with love and warmth and joy. I will miss him."

FREE FALL ASSOCIATES

Jon Freeman and his wife, Anne, set up Free Fall Associates along with game designer Paul Reiche, working on *Pac-Man* clone *Tax Dodge* in 1982 for the Atari 8-bit system. Although that game wasn't a huge success, a development contract from the then-tiny yet growing Electronic Arts put the firm on the right path and in 1984 the firm produced the hit game *Archon*.

Other top games followed, including *Murder On The Zinderneuf* and *Swords Of Twilight*. It also developed the *Star Control* series. By this time, Paul Reiche had left and went on to found the developer Toys For Bob.

Free Fall Associates is now Free Fall Games (the name changed in 2002) and the company continues to exist.



EPYX



» Many of Epyx's later games ended up on the Atari Lynx including *Electrocop*, *Blue Lightning* and *Chip's Challenge*, as this advert shows.



By now, Jon and Jim were becoming impressed by the sales and positive reviews of their games. What began as a way to write off a computer purchase was fast becoming a career, and Jon continued to work on some of the era's defining games, knocking out *Rescue At Rigel* in 1980 and *Crush, Crumble & Chomp!* in 1981 under a new label: Epyx.

At about the same time at the West Coast Computer Faire, Jon met his future wife, Anne Westfall, a programmer for Disco-Tech, part of a civil engineering firm. She'd written a surveying program for the TRS-80 and was demonstrating the software at the Faire in a booth next to that of Automated Simulations. The pair dated for six months and Anne eventually began to work for Automated Simulations.

By now, however, Jon was beginning to get annoyed. Automated Simulations had grown so it could cope with the more ambitious games the firm wanted to produce. However, office politics were beginning to surface. Soon after, following some heart-to-hearts, a decision was made. In what a few analysts have since referred to – tongue firmly in cheek – as gaming's 'Yoko Ono' moment, Jon and Anne left Automated Simulations to set up new design company Free Fall Associates, together. It prompted some major management changes.

The new management tier at Automated Simulations, headed by new CEO David Morse, decided to rename the company and took on the Epyx branding. More games followed, but rather than being based on adventuring, the focus was increasingly combat and action. Nevertheless, Jim still played a big part, pushing ahead with the strategy-action game *Dragonriders Of Pern*. But it was to be his final title – the management looked at the bottom line and saw sales of games such as *Jumpman* had far exceeded titles like *Dragonriders*. A fresh direction towards action was prescribed and Jim left Epyx, taking some of the programmers with him.

With the two founders now gone, Epyx ploughed on and 1983 became a golden year. The firm merged with fellow US company Starpath, a company that not only produced the most faithful *Frogger* conversion for the Atari 2600, but that had also produced the Supercharger add-on for the console that boosted its memory. Epyx took on Starpath's programming staff and the combined company, based south of San Francisco, was boosted to around 35 employees.

"I started just after the merger," says former Epyx programmer Chuck Sommerville, the man who later went on to develop *Chip's Challenge*. "I was from Sirius Software, which had just gone belly up and I remember quite vividly that the Epyx building was small, but that all the programmers at least had their own offices with closing doors."

Such small pleasures of working life must have been motivational. For in that year, Epyx's stature in the industry was firmly cemented. Not only had *Jumpman* been a major success, but *Pitstop* proved unstoppable and there was also a little game called *Impossible Mission* that seemed to impress a few critics, for reasons people just can't work out today.

Sorry, we jest. *Impossible Mission* was astonishing, blending skill and timing and proving hugely original and deep. We all know the famous line from the game, but that was only the quarter of it, programmer Dennis Caswell giving the industry a lesson in innovative design and producing a game that had a unique random level design.

"IMPOSSIBLE MISSION WAS ASTONISHING, BLENDING SKILL AND TIMING AND PROVING HUGELY ORIGINAL AND DEEP… IT WAS A LESSON IN INNOVATIVE DESIGN"



» Another Epyx advert, this time showing just how large the catalogue was becoming.

The name itself is bound to have helped sales, based, as it was, on a switched-around play on the television hit *Mission: Impossible*. But such a recognisable pairing of words would not succeed without a decent game behind it: the agility of the running man, the synthesised speech and the rave magazine reviews combined to give Epyx a lift and set it up for the games to come.

"This was the best game Dennis Caswell ever did," says Chuck. "It was a breakthrough for Epyx because it was the first they did that included voice."

In 1983, another big thing happened. A major deal was struck between Epyx and Geoff Brown, the 37-year-old founder of US Gold. Suddenly the market for its titles had grown wider. Geoff had been on the lookout for a supply of quality American-produced games. "I had never been to America before," he says. "It was also the first time anyone from the UK had been out to see them. I just asked them for publishing rights to their games and they really had nothing to lose. All they asked for was a guaranteed number of unit sales in the year and sometimes a small advance. Getting *Impossible Mission* on board was a major coup."

The big-name games continued. As if to prove Epyx had shed its *Dungeons & Dragons* past, along came *Summer Games* to coincide with the Los Angeles Olympics in 1984. "I was actually hired originally to work on the port of *Summer Games* to the Apple II," says Chuck. "I went to Epyx because I was offered a job there by the ex-president of Sirius, Jerry Jewell, who had signed on as a project manager. Being able to work on a title like *Summer Games* was something special."

Created in half a year and running in assembly code, *Summer Games* was based on a Starpath decathlon game called *Sweat!* and the lead programmer

WHERE ARE THEY NOW?

Jon and Anna Freeman are still married and run Free Fall Games. Jon recently worked on development with Square Enix.

Jim Connelley set up The Connelley Group, which later shut down.

Stephen Landrum and Chuck Sommerville now work for LED Holdings, which produces environmentally friendly lights.

Dave Needle has retired.



was Stephen H Landrum. The unfinished Starpath game was dumped and all of the efforts were pumped into the new game.

Stephen helped Chuck with the Apple II conversion, created the game's intro and produced the diving and pole vault events. "It was the first time Epyx had taken on a graphic artist," says Chuck. "To have such a specialist wasn't part of what we did until that point. Before then we'd have people involved in all areas. But having someone who looked after the graphics enabled us to produce games that looked stunning and it wasn't long before we ended up with other specialists for other areas like music."

Selling over 1 million copies, it led to a host of similar titles. Within a few years, Epyx was the king of sports, knocking out *Winter Games*, *World Games*, *California Games* and many others. All the time the company was getting bigger, making around £5 million each year and employing up to 200 people.

"It was getting so big," says Chuck. "We had to move to 600 Galveston, in Redwood City. The building had separate areas for different groups. I worked in an area we called 'Left Field', because it was so far removed from everything else."

Epyx not only developed games but had become a major publisher of third-party titles, too. But it was not content with purely producing games and so work began in 1986 on a handheld console.

The company was a relative novice in hardware production. Its only real piece of notable hardware had been the FastLoad, a cartridge that plugged into the C64 that was created by programmer Scott Nelson. Owners of the computer had snapped up the cartridge in their droves since it allowed games inserted in the 1541 disk drive to load five times faster than normal, and it also cut down on the hassle of multiple keystrokes needed to save or load files. It also had lots of special case code for known products on the market to sidestep some copy protection.

The new handheld machine, however, was a different kettle of fish. Called the Handy, it was proposed that it would be a 16-bit full-colour console. And with David Morse (who was behind the successful Amiga) on board, as well as RJ Mical and Dave Needle who had worked alongside him, it was a project that all involved felt could not fail. After all, it had 4,096 colours, used the impressive 65C02 chip and it allowed for fast pseudo-3D games.

"I wasn't attracted to Epyx at all," admits Dave Needle. "When Morse, RJ and I conceived the Handy, it was Morse's task to build a corporate environment in which RJ and I could architect, design, build, and produce our new platform and the required system software, tools, applications and support structures.

"EPYX HAD HIT FINANCIAL PROBLEMS, AND THE C64 MARKET, WHICH WAS EPYX'S CORE WASN'T PULLING IN AS MUCH CASH"

Morse picked Epyx as our umbrella and installed us as the new team. Quite frankly, I'd never heard of Epyx before then."

A Handy division was set up. Programmers were moved into a cube in a secured area. Every summer there was a company party, with music and food. Chuck usually supplied the music with his home stereo and big speakers.

In 1987, however, the fun and games started to come to a halt. Epyx began to hit a rocky patch. It had attempted to enter new markets, not only with the Handy but with serious utilities such as a graphics package, and board games such as Head-On Football. It had also invested in VCR games, which failed to find a market, and had subsequently left Epyx's fingers burned, and it even created a joystick – the Konix-manufactured 500XJ. With so many thumbs mashing up so many pies, a financial collapse was looming.

By the time the Handy was ready, Epyx had hit financial problems. The C64 market, which was Epyx's core audience wasn't pulling in as much cash and staff levels were starting to fall, from 200 at its peak to just 20. Some serious action was needed and so David Morse – having tried unsuccessfully to sell the Handy to Nintendo only to discover the Game Boy was about to be produced – approached Atari. A deal was struck allowing Atari to manufacture the handheld and Epyx to produce the games. Atari would pay Epyx for each game it produced and it threw the firm a major lifeline. Now it could concentrate on being the number one developer for a brand new system.

Yet it didn't work out like that. The Handy – or the Atari Lynx as it was renamed – became the death of Epyx. Atari put a clause in the contract that said any bugs that were flagged up had to be fixed within 60 days. Atari, however, would only comment on the bug fixes late in the 60-day time period, giving Epyx little time to fix them. The outcome? Atari would withhold payments, Epyx's cashflow was damaged and it went down the path of bankruptcy.

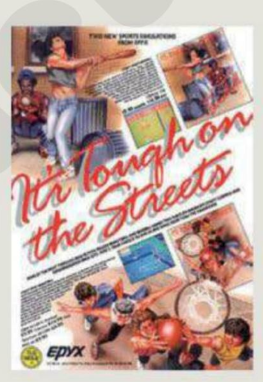
"It was a particular trick that Atari used," says Dave Needle. "In the end, Atari withheld payment for lots of the software until Epyx was in fact out of operating funds. Then Atari made a move to acquire the Epyx assets with no payment at all. The withheld payment amount was at one time $666,000. A coincidental but interesting number."

In the end, Atari acquired the rights to most of Epyx's games, having bought them from the Bridgestone Group, a Christian software firm that had little need for many of the titles. But Atari itself went bankrupt and the firm was acquired by Hasbro. Infogrames then took over Hasbro and later pushed Atari back to the fore. Since then, System 3 has bought the rights of Epyx titles such as *Impossible Mission* and *California Games* and is re-releasing them on systems such as the PSP, Nintendo Wii and DS.

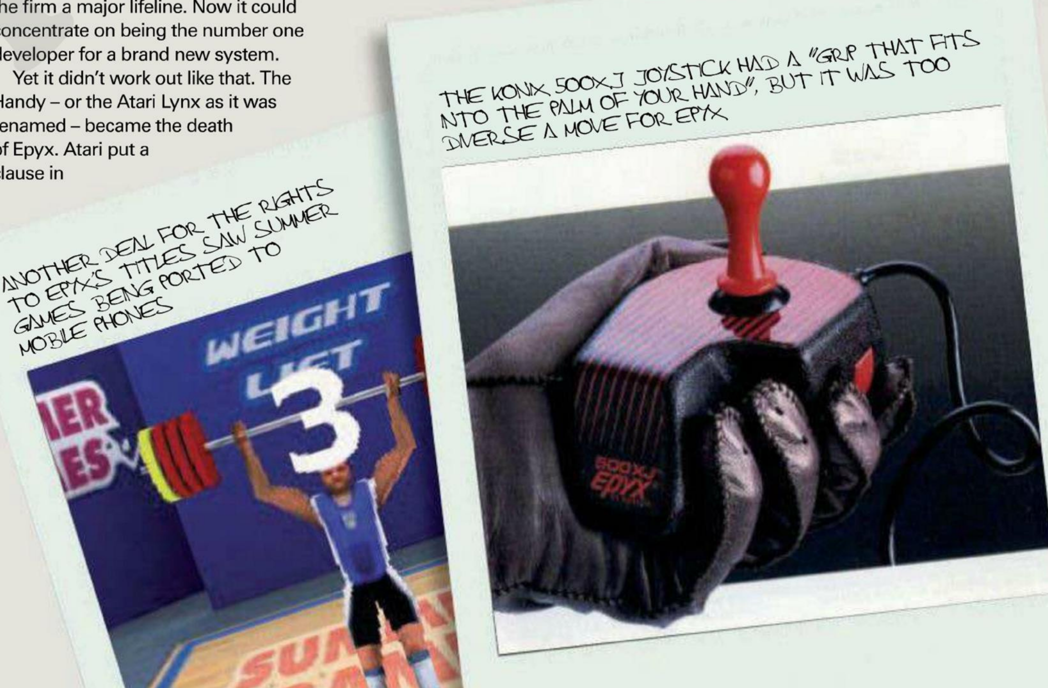
"Epyx went bankrupt because it never really understood why it had been successful in the past," says Chuck. "It decided to branch out in a lot of directions, all of which turned out to be failures."



» Geoff Brown flew to America in a bid to secure Epyx's titles in 1983.



» US Gold adverts like this were commonplace in British magazines following a deal struck with Epyx.



ANOTHER DEAL FOR THE RIGHTS TO EPYX'S TITLES SAW SUMMER GAMES BEING PORTED TO MOBILE PHONES

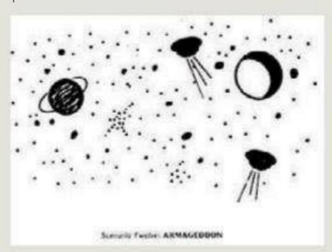
THE KONIX 500XJ JOYSTICK HAD A "GRIP THAT FITS INTO THE PALM OF YOUR HAND", BUT IT WAS TOO DIVERSE A MOVE FOR EPYX

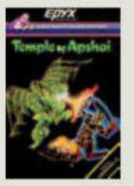
THE GAMES OF EPYX

STARFLEET ORION

(1978, PET, TRS-80, Apple II)

» *Starfleet Orion* was one of the first computer war games and the title, and launched Epyx (or Automated Simulations as it was then known). It allowed two players to engage in a spot of tactical space combat and despite looking rather basic, proved to be a lot of fun.





TEMPLE OF APSHAI

(1979, PC, Apple II, VIC-20, Commodore 64, Atari 8-bit, Atari ST, TRS-80, Amiga, Macintosh)

» As a lone adventurer investigating the ruins of the Temple of Apshai, this role-playing game had you seeking out treasure and trying to defeat monsters in a bid to escape the dungeon.





RESCUE AT RIGEL

(1980, Apple II, DOS, TRS-80, VIC-20, Atari 8-bit)

» Yet another early adventure game by Automated Systems. You played human adventurer Sudden Smith, tasked with rescuing ten humans held in a 60-room complex over six floors while avoiding the Tollah alien race. It's very similar in style to Epyx's *Temple Of Apshai*.

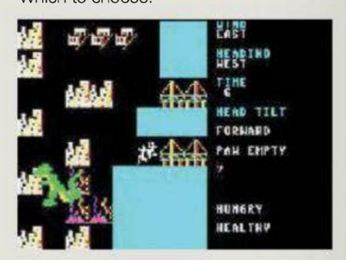




CRUSH, CRUMBLE & CHOMP!

(1981, Apple II, Atari 400/800/XL/XE, Commodore 64, Commodore VIC-20, DOS, TRS-80)

» Usually you have to battle against monsters smashing up a city. *CC&C!* was the first game in which you could control that monster, *Rampage*-style, with six horrors from which to choose.





BREAK DANCE

(1984, Commodore 64)

» Now this was a spectacular misfire. Effectively a 'street' take on classic electronic game *Simon*, *Break Dance* is a dull, monotonous game that's about as much fun as having your molars extracted. Let's thank our lucky stars that it appears to have been confined to just the Commodore 64.





DRAGONRIDERS OF PERN

(1983, Atari 8-bit, Commodore 64)

» Based on the popular fantasy novels by Anne McCaffrey, this was a solid strategy game mixed with action that featured plenty of political battling and could be played by up to four players. Sadly, it was to be Connelley's final Epyx title.



JUMPMAN

(1983, Atari 400/800, Commodore 64, Apple II, PC)

» Creator Randy Glover was addicted to Nintendo's arcade smash hit *Donkey Kong* and his obsession shows in this 30-level game – right down to calling the heroes in both titles Jumpman (later renamed Mario by Nintendo).

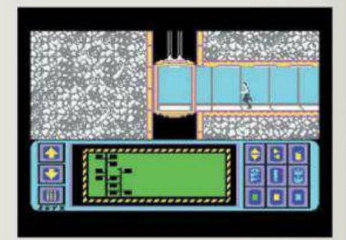


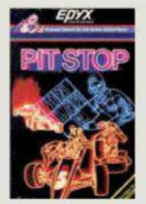


IMPOSSIBLE MISSION

(1983, Acorn Electron, Amstrad CPC, Apple II, Atari 7800, BBC Micro, Commodore 64, Nintendo DS, Master System, ZX Spectrum)

» "Another visitor. Stay a while… staaay forever!" Who could resist scouring Professor Elvin Atombender's underground complex for nuclear missile launch codes…?





PITSTOP

(1983, Atari, Commodore 64, ColecoVision)

» Randy Glover did a fair amount of work on *Pitstop* but left Epyx before he was actually able to finish it. Nevertheless, this multiplayer racing game turned out to be a fun one with a neat interactive refuelling sequence that was pretty impressive.

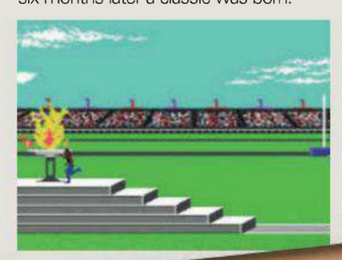




SUMMER GAMES

(1984, Commodore 64, Apple II, Atari 2600, Atari 7800, Atari XL/XE, Master System, Amiga, ZX Spectrum, Amstrad CPC, Atari ST)

» Epyx merged with Starpath and found it was working on a decathlon game. With the 1984 Olympics around the corner, the game was re-jigged and six months later a classic was born.

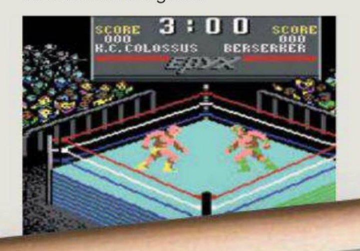


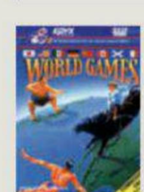


CHAMPIONSHIP WRESTLING

(1986, Apple II, Atari ST, Commodore 64)

» Although a bit 'all presentation, little gameplay', the multiplayer mode was the undoubted highlight. Eight wrestlers, all copied from Eighties WWF stars, were available to beat your mates with and the end result was a surprisingly solid take on the genre.





WORLD GAMES

(1986, Commodore 64, MSX, Amiga, Atari ST, Amstrad CPC, ZX Spectrum, Apple II, Sega Master System, PC)

» You'd have thought Epyx would have no sports left to push. Then it pulled some weightlifting, slalom skiing, log rolling, cliff diving, caber tossing and sumo wrestling out of the bag.



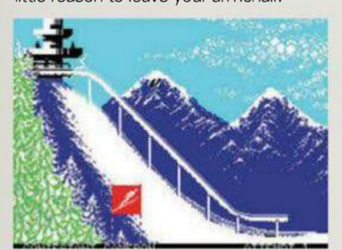




WINTER GAMES

(1986, Amiga, Apple II, Atari ST, Apple IIGS, Amstrad CPC, ZX Spectrum, PC, Atari 2600, Atari 7800, C64, NES, Famicom Disk System)

» With alpine skiing, ski jumping, bobsled, figure skating and speed skating among the offerings – all to the usual high Epyx standards – there was little reason to leave your armchair.

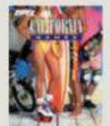


SUPER CYCLE

(1986, Amstrad CPC, C64, Atari ST, Spectrum)

» Looking very similar to Sega's *Hang-On* series (no bad thing in our book), *Super Cycle* was a firm indication that Epyx had shed its adventuring past and was firmly about all-out action gaming instead. A fast and furious racer that still plays well today.





CALIFORNIA GAMES

(1987, Amiga, Amstrad CPC, Apple II, Apple IIGS, Atari 2600, Atari Lynx, Atari ST, Commodore 64, DOS, MSX, NES, Sega Mega Drive/Genesis, Master System, ZX Spectrum)

» *California Games* was the fifth in the series with six events allowing up to eight players to compete or practise BMXing, flying a frisbee, skateboarding, surfing or rollerskating.



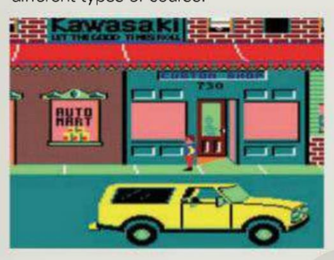
IN BRIEF

Dungeons & Dragons fanatic Jim Connelley buys a Commodore PET to help him run his *D&D* group. He later decides he needs to write off the purchase and so gets his new friend Jon Freeman to help him create a new game. They set up Automated Simulations to sell the title *Starfleet Orion*, and go on to create a sequel. When these games sell well, others games follow – including *Impossible Mission* and *Summer Games*. But the company becomes too ambitious. It branches out into too many areas. Bankruptcy looms. Can its handheld console the Handy save them?

4X4 OFF-ROAD RACING

(1988, Amstrad CPC, Atari ST, Amiga, DOS, Commodore 64, MSX, ZX Spectrum)

» Four vehicles were on offer with this cool off-road racer and all could be upgraded, too – essential for getting around the mud, desert, mountains and ice of the four different types of course.



BLUE LIGHTNING

(1989, Atari Lynx, Atari Jaguar CD)

» The Atari Lynx was very close to Epyx's heart – given that it created the thing. And the developer was proud of military aeroplane blaster *Blue Lightning*, which provided hours of air combat fun. Effectively Epyx's take on Sega's *After Burner*, *Blue Lightning* featured a solid mission structure and glorious visuals.



CHIP'S CHALLENGE

(1989, Windows, MS-DOS, Atari Lynx, Atari ST, Amiga, Amstrad CPC)

» This tile-based puzzle game saw you play as nerdy Chip, desperate to impress Melinda the Mental Marvel. She made him work through 150 difficult levels, using keys, shields, and special shoes to bypass obstacles.

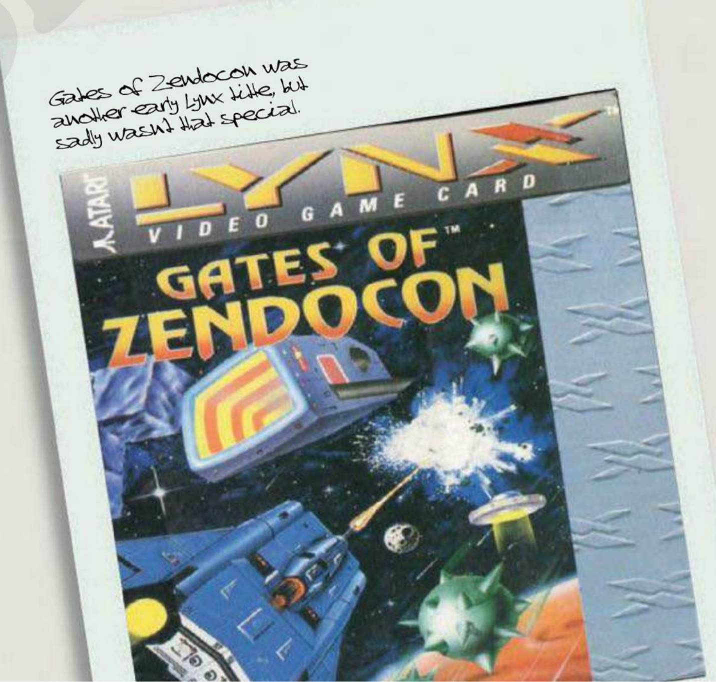


ELECTROCOP

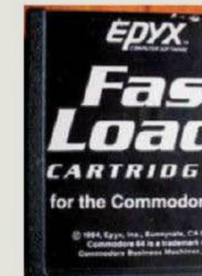
(1989, Atari Lynx)

» Drawing its influence from *Xybots*, *Electrocop* provided a blast of tense action-adventure over 15 mazy levels, showing just what the Atari Lynx could do, particularly in 3D. A solid combination of blasting and puzzling that still holds up today.





Gates of Zendocon was another early Lynx title, but sadly wasn't that special.



» Epyx also made the FastLoad cartridge, which was hugely popular and sped up loading times.



» Chuck Sommerville joined in 1983 and became one of Epyx's main programmers.


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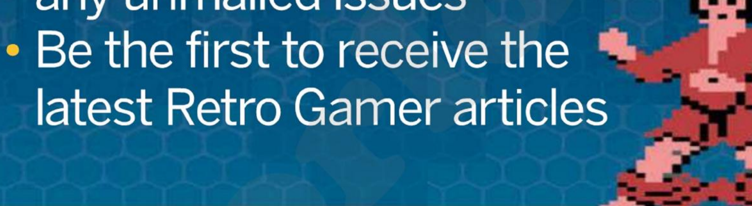
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RAMPAGE

"THEY DID THE MASH, THEY DID THE MONSTER MASH"



- » **PUBLISHER:** SEGA
- » **RELEASED:** 1988
- » **GENRE:** ARCADE ACTION
- » **FEATURED HARDWARE:** SEGA MASTER SYSTEM
- » **EXPECT TO PAY:** £5+



HISTORY

It's always disheartening to hear Sega's Master System being dismissed as the 'little 8-bit console that nobody cared about', because it really was a cracking little console that sported some superb arcade conversions across a wide range of genres.

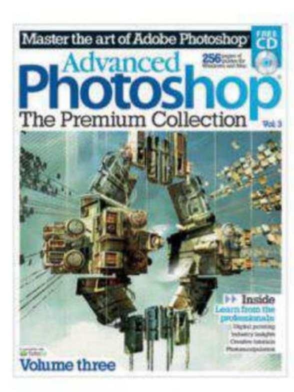
Take this excellent conversion of Midway's *Rampage*, for example. It might not boast the full three-player experience of the original coin-op and you could argue that the Lynx conversion – which came out a good two years later and sported a fourth character – was arguably superior, but at the time of its release, Sega's effort was virtually untouchable up against other versions of the time and managed to capture all the chaotic excitement of the hit arcade game.

Taking control of one of three transformed humans – George the Gorilla, Lizzie, a Godzilla wannabe, and Ralph the Wolfman – you're required to smash your way across America, leaving the sort of destruction and devastation in your wake that would, no doubt, give insurers headaches for years to come. As your rampage continues, helicopters fly overhead and pepper you with bullets; soldiers pop out from windows and toss grenades towards you, while tanks pummel you from the ground. Luckily, smashing open buildings will reveal objects that can be eaten to replenish health, but make sure you jump clear before the demolished building collapses.

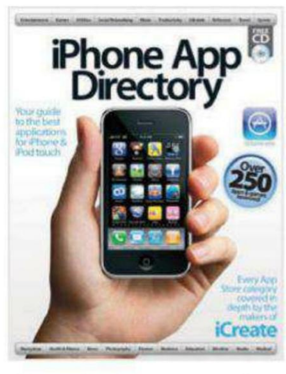
The Master System's colour palette does an excellent job of capturing the vibrancy of the original coin-op, while George and co are absolutely huge sprites and are brilliantly animated, capturing all the humour and subtle nuances seen in the arcade original.

Sure, there's a fair amount of flicker to be found, which is a little disheartening, but the conversion is so solid, and the action so fun that this little niggle soon seems irrelevant. Few games on Sega's Master System allowed you to create so much gleeful chaos, and while it's not the best arcade conversion to be found on the machine, it's still a stunning achievement.

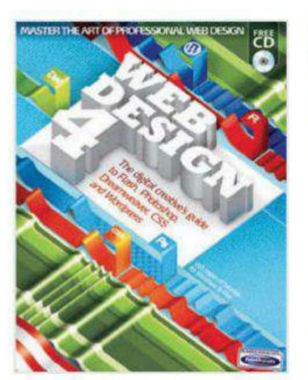




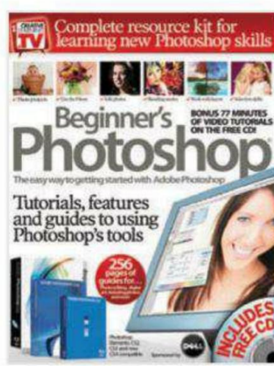
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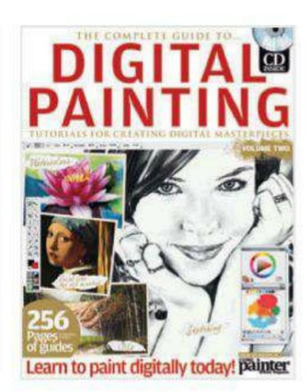
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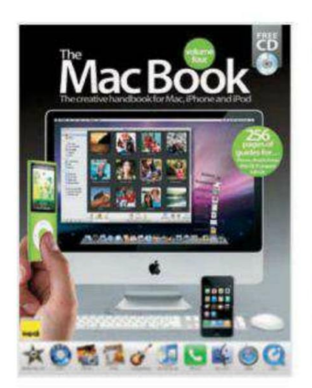
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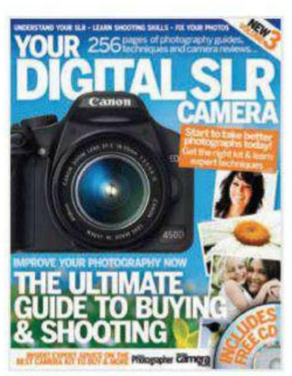
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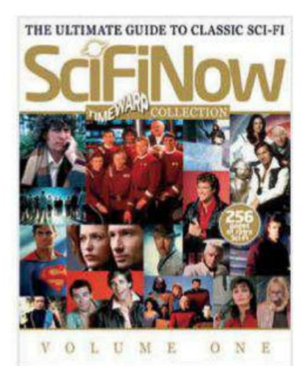
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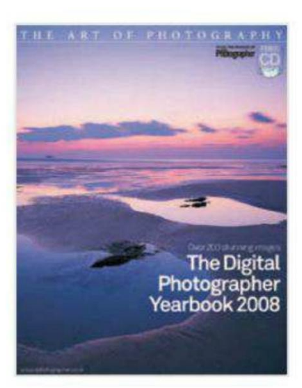
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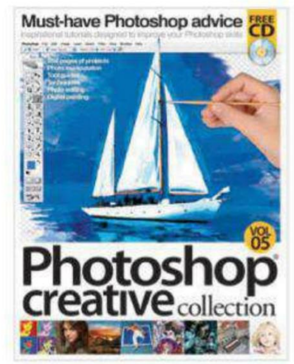
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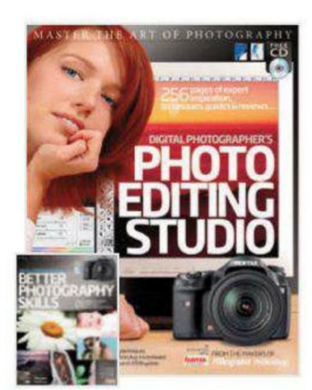
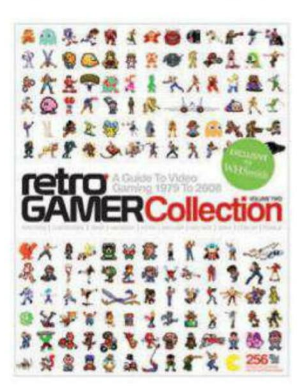
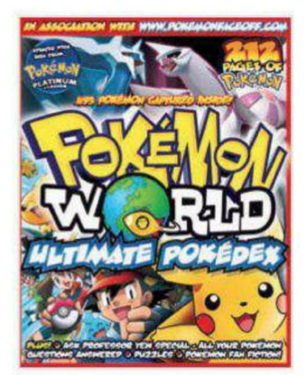


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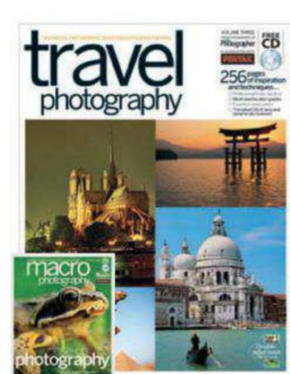
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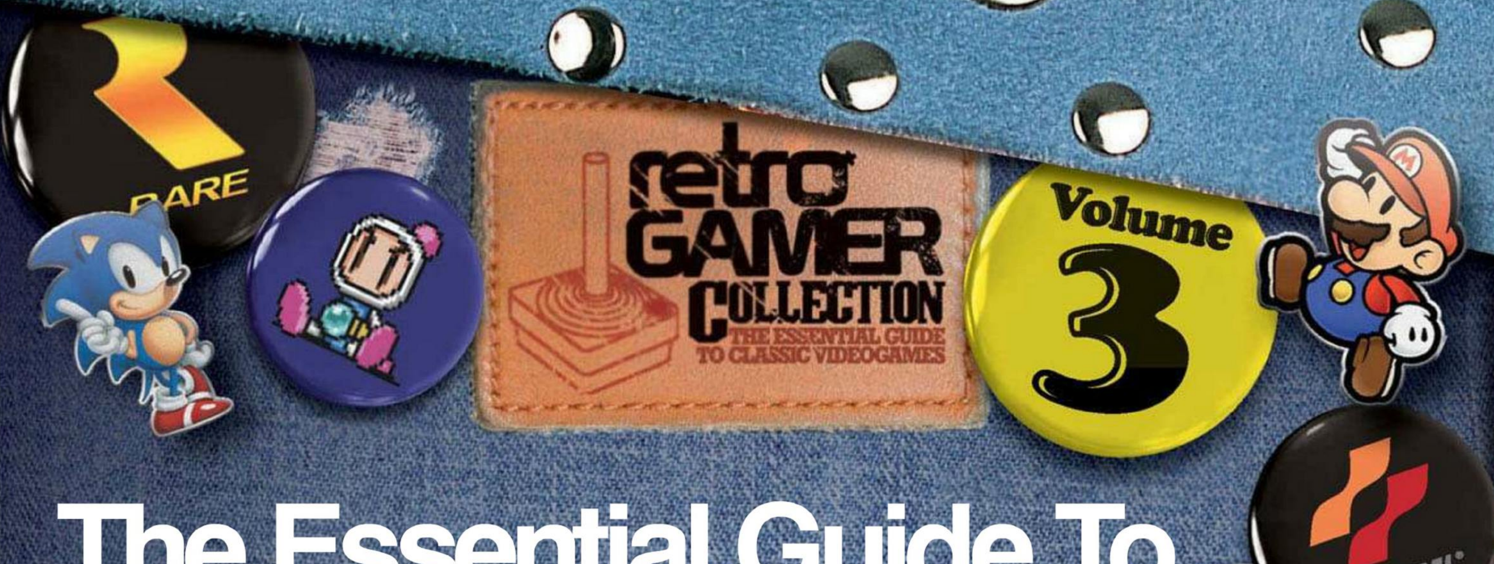
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